

THE BEST SELLING AIRCRAFT MODELLING MAGAZINE!

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Page Issue! **96**

Scale AVIATION Modeller International

Birth of the Augsburg Eagle

by Richard J. Caruana

Lightning Strike

Part 1

by Bill Clark

Kingcobra

by Joel M. Hamm

Centauro!

by David Batt

Plus

Aviation Colour File

Photo Album—Lightning

IPMS Norway Nationals '99

The Modeller & the Internet

Volume 5 Issue 6 June 1999 £2.50



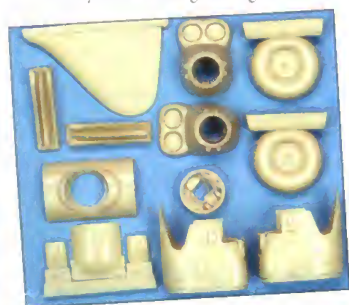
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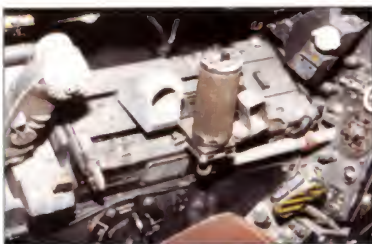


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Joel M. Hamm uses the MPM and Aoshima 1/72nd scale kits to make his model of the mighty Bell P-63 Kingcobra



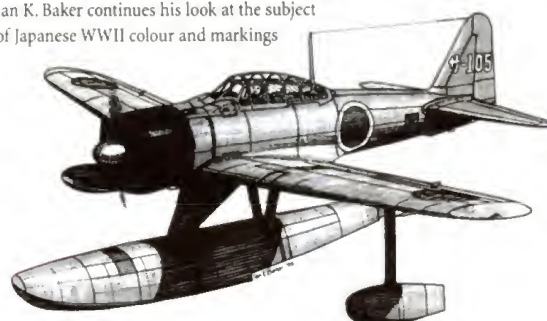
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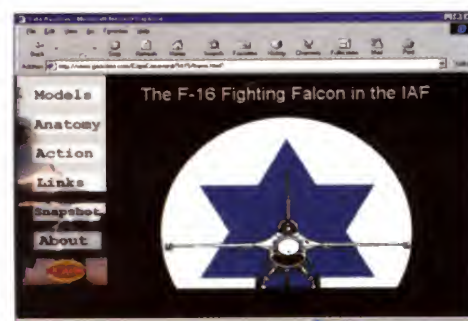


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Editorial



This time of year is always an odd one for modellers in general I feel. Here in the UK we have actually seen some good weather of late, and as a result things like the expedition to rediscover the end of the garden, and that horror of horrors, decorating, are rearing their ugly heads. I must admit that as I sit here and look out across the garden on a sunny evening, the temptation to actually go into my modelling room is very weak. I have hundreds (and I am not kidding!) of projects on the go at any one time, and I really should take time to work on them, but with nice weather and the completion of this edition I am sure that my model room will only see me fleetingly before next month. The Spring and Summer months are basically a 'purchasing' time, with little modelling going on. As modellers I am sure many of you are like me and spend a lot of time looking for information in bookshops and at museums. Visiting a modelling shop is also high up the priority list but this does mean that we tend to neglect our hobby. That is not bad, as a break from things can often be a great help in rekindling your enthusiasm. I have recently found myself lagging a bit on the enthusiasm front, but rekindled it with a move to another subject. Shocking though it may seem to many of you ardent aviation modellers out there, I am back making car and motorcycle models, and loving every minute. Sure, the aircraft are still my first love (after my wife Lynette, and our six cats of course), but I found the relaxation offered by making something completely out of the ordinary quite fun. Now I

am not saying we should all start building something completely different, but if you are feeling a little low about modelling, why not have a go at something else. If you make modern jets, make a civil airliner, if you make WWII in 1/48th, make a big 1950's bomber in 1/72nd, if you make only fighters, have a go at a seaplane. The change is easy, and I am sure many of you will be refreshed by the enjoyment you get from making something you would not usually bother with. I know this is true, as many of our Review Team often say "I would not usually make seaplanes, but I have thoroughly enjoyed making this model, so I think I will go out and buy some more". It's Springtime, it's time for a change!

Before I sign off this month I hope that you all enjoyed last month's little surprise 96-page issue, and will likewise enjoy this bumper edition as well. I did say that I would try to include features in 1/72nd, 1/48th and 1/32nd each month, but as you will see we have no 1/32nd scale stuff this time. The reason for this is, as always, getting people to write it. So, and I know you already know what I am going to say, if any of our readership out there are interested in contributing feature articles on 1/32nd scale (and larger) subjects, please drop me a line. I will be delighted to hear from you.

Richard A. Franks
Editor

VOTE! Kit of the Year

It is time to vote once again! Make your feelings known about the kits you liked in 1998, by voting for them in the annual SAMI awards. All of the products should have been produced between 1st January and the 31st December 1998, that is the only restriction and the rest is up to you.

If you wish you may vote up to four items per category. Rate the items on a scale of 1-4, 1 being the best.

All entries will automatically entered into our very special prize draw. The prizes will be:

The Winner receives the 'Kit of the Year'

Runners-Up will receive a one year free subscription to Scale Aviation Modeller International.

The categories are:

- 1: Best Injection Moulded Kit
- 2: Best Limited Run Injection Moulded Kit
- 3: Best Resin Kit
- 4: Best Vac-formed Kit
- 5: Best Resin Accessory Manufacturer
- 6: Best Etched Brass Accessory Manufacturer
- 7: Best Decal Manufacturer
- 8: Best Mail Order Company

Special SAMI categories, applicable to all features in Volume 4:

- S1: Best Model Feature
- S2: Best Sketchpad
- S3: Best Aviation Feature
- S4: Best Cover



Your Entries: All entries should be made in writing to: 'Kit of the Year', SAM Publications, 4 Princeton Court, Pilgrim Centre, Brickhill Drive, Bedford MK41 7PZ. Alternatively you can fax your entry to (44) 0 1234 261251 or you can e-mail on samkit@globalnet.co.uk. DO NOT phone in your entries to the editorial office. Thank you.

Disclaimer: Employees/volunteers working for SAM, DMZee Marketing, or their families are not permitted to enter. The first five entries drawn will win. Entries are limited to one per person/household.

No correspondence will be entered into. The judges' decision is final. Winners names will be printed in the next edition of Scale Aviation Modeller International after the draw date. Photocopies are acceptable. All entries should be received at SAM Publications by the 16th July 1999, when the draw will take place.

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Questions to the Editor or Contributors

If you have a question or query you wish to raise with the Editor or any of the contributors to this magazine, they should be made **IN WRITING** to the SAM Publications address. Neither the Editor, nor any of the contributors, are at SAM Publications on a daily basis. The Editor regrets that he cannot be contacted during working hours at home, or at work and asks all enquirers to appreciate this fact and be patient. Please understand that the staff at DMZee Marketing/SAM Publications do not have access to the information you require and therefore cannot answer your questions on the phone. Please enclose a stamped SAE with all enquiries, if you anticipate a reply. Thank you.

Samples for Review

Scale Aviation Modeller International is always happy to review new products within its pages. Any item which you feel is appropriate will be given due consideration for inclusion in the title. Any company, trade representative, importer, distributor or shop which wishes to have products reviewed within Scale Aviation Modeller International should send them directly to the editorial address and clearly mark them for the attention of the Editor. Confirmation of receipt of the samples will be supplied if requested. For all international companies etc the above applies, but please ensure that the package is clearly marked for customs as a 'sample, free of charge' to reduce the risk of unnecessary delays. Thank you.

Company/Suppliers, Address Details etc.

Please note that the staff at DMZee/SAM Publications cannot help with general enquiries about contact details for companies, importers or model shops whose products may be mentioned in Scale Aviation Modeller International if the address information is not included with the review etc. Please check the advertisements in this journal for all suitable UK sources and only contact the firm directly if it is noted that there is 'no UK source'. We are sorry, but we cannot help with the details of companies which do not advertise in this magazine. Thank you.

Combat Models



1/72nd

The most recent release from Combat is the C-124 Globemaster II. This kit is vac-formed and retails for \$34.95 plus shipping.

Future releases will be the C-17 Globemaster III (\$42.95) and the C-133 Cargomaster.

There is no UK source for these kits currently, so contact them directly at:

Combat Models, 400, 3rd Street,
West Easton, PA 18042, USA.

Lumir Vesely

1/48th

The next kit due from this manufacturer will be the Junkers Ju 160. This will be followed by similar resin kits of the Klemm Kl 35D and the Arado Ar 231.

Broplan

1/72nd

With the Piper Chieftain released (see Preview), the next vac-formed and limited-run injection moulded plastic kit due from this manufacturer will be the Piper PA-31 Navajo.

D. Rutman

This is a new company in America who are producing detail sets for a number of the Combat Model vac-formed kits. Those released so far include:

1/72nd

In this scale there is a set for the C-141A/B which comprises a new cockpit interior and wheel wells all in resin. The set fits the old Nova kit, or the new Combat example and retails for \$34.95.

1/32nd

In this scale there is a set for the Ta 152H which contains a new spinner, propeller blades, cowling, exhausts, undercarriage and a full cockpit interior for \$34.95. There is another set for the Ta 152H which offers just the spinners, propeller blades and cowlings for \$22.95. There is also a set for the F-105D which contains a new cockpit, ejection seat, wheel wells, tail section of fuselage with air brakes on both sides, all in resin, and white metal undercarriage legs. This set retails for \$39.95. All of these sets are designed for the Combat Models kits.

Due very soon in this scale will be a detail set for the Combat Models F-101C.

This manufacturer will also produce a number of resin kits during 1999, and those projected for release include the CH-47 Chinook, F-8 Crusader and the Junkers Ju 88C.

1/24th

A 75mm resin figure of a Luftwaffe pilot leaning against his aircraft is also available.

This figure retails for \$12.95 plus shipping.

There is no UK source for this range at present, so contact them directly at:

131 West Laurel Street, Bethlehem,
Pennsylvania 18018-6632, USA.

MPM

1/72nd

Following on in their new 'upgrade' series, the McDonnell FH-1 Phantom I has been reissued. This kit now contains new resin wheel wells and cockpit interior and the UK price is £6.00.

Due for release in June will be the new kit of the Fairey Barracuda. The kit will once again be limited-run injection moulded plastic with resin detail parts.



Special Hobby

1/72nd

The most recent release in this range is the Dornier Do 317 V1. This kit is limited-run injection moulded plastic with resin interior and engines.

Due for release in July will be the Hiller UH-12 (H-23) and again it will be in the same format as the Do 317 V1 kit. The confirmed UK prices for these two kits are £15.95 and £5.00 respectively.



1/48th

The first kit in this scale from Special Hobby will be out in July and it will be the Mil Mi-1. The kit's main components will be in limited-run injection moulded plastic, but the interior will be resin and a number of detail parts will be supplied as etched brass. This will be followed in August with a similar kit of the Sikorsky R-4.



Azur

1/72nd

Due for release in May are the Loire-Nieuport LN.411 and the Bloch MB.155. Each kit is limited-run injection moulded plastic with etched brass and resin detail parts. The confirmed UK prices for these are £8.00 and £6.75 respectively.



Shesto



A new tool is now available from this company which will be of interest to modellers. It is a set of clip-on magnifying lenses for your glasses. These come in two forms, either with +3 or +1.5 magnification. Each set retails for £9.95 and comes with its own protective pouch.

Minicraft

The latest modelling product from Minicraft (tools) is a 'quick-grip clamp'. This clamp features a pump-action to exert pressure and a special quick-release to allow you to let go in a hurry. The clamp can be used both in external and internal modes, and has a capacity of up to 115mm externally, and between 76mm and 204mm internally.



Each clamp retails for £9.99, and for more details contact:

Minicraft (Tools)
Macford Products Limited, 1 & 2
Enterprise City, Meadowfield Avenue,
Spennymoor, Co. Durham. DL16 6JF
Tel: (01388) 420535
Fax: (01388) 817182

Accurate Miniatures

1/48th

The long awaited kits of the Grumman F3F-1 and F3F-2 are now officially listed as being due in the UK by August, and a price of £24.99 each has also been announced.

There is no release date for the B-25 Mitchells yet, but a UK price of £39.99 each has been confirmed.



1/72nd

The Iluyshin Il-2s due in this scale are listed at £16.99 each, but once again no confirmed release date is currently available.

CMK

1/72nd

A resin and etched brass cockpit update set for the Academy Bell P-39Q Airacobra has just been produced by this manufacturer and it retails for £4.95. Also available are similar sets for the Hasegawa Curtiss P-40E (£4.95) and the Academy Mitsubishi A6M5c (£4.95).

High Planes

1/72nd

This company have been busy of late, with a number of releases. Due in April were the Bristol Beaufort Mk 1, which includes two SEAC colour schemes, and the Douglas DB-7, which comes with two French Air Force colour schemes.

Due in May are the Douglas Havoc Mk 1 'Intruder' (three decal options), the Ryan STM/PT-20 (with US Army, RAAF and Dutch NEIAF markings) and the Learstang 'Vendetta' racer.

All of these kits are limited-run injection moulded plastic with white metal and/or resin details.



Hasegawa

1/72nd

As an update to our 'deleted' listing in the April edition (Vol 5 Iss 4 Pages 244-6), Amerang have informed us that some of the items listed as no longer being available, will in fact remain available in the UK. Those kits involved are:

AP39 Hawker Hurricane 'Last of the Many'
BP7 A-1H Skyraider 'US Air Force'
PT11 F-4C/D

P23 F-14A Tomcat (Plus)

Noted in America recently were reissues of the S-3B Viking with 'Atsugi 25th Anniversary' markings (\$23.98) and the Sikorsky SH-60B with 'HSL-51 Warlords Special' markings. Due for issue with new markings were the Mitsubishi G3M2 Type 96 Nell 'Shinchiku Flying Group' (\$37.98), Kawasaki Ki-61 Type 3 Hien 'Home Defence' (\$10.98) and the N.A. P-51D '33rd Fighter Group' (\$10.98).

The new Focke Wulf Ta 154A-0 is listed in the USA as retailing for \$33.50.



1/48th

Noted for reissue in America during April was the Grumman F-14A Tomcat with 'Atsugi 25th Anniversary' markings (\$61.98).

Released in America during early May were the new Messerschmitt Bf 109K-4 (\$23.98). Also available were the Junkers Ju 87D-1/D-3 (\$32.98), Aichi D3A1 Type 99 Model 11 Val '2nd Flying Group' (\$32.98), Messerschmitt Bf 109G-6 'Nachtjäger' (\$27.98) and N.A. P-51D 'Glamorous Glennis'.



The Nakajima B6N2 Type 12 Jill with 250kg bombs is also



available in the USA for \$34.98.

1/32nd

The reissue of most of the kits in this scale from Hasegawa has been continuing and the Spitfire Mk V (08052 \$29.98), Mitsubishi A6M5c (08054 \$29.98) and the Grumman F6F-3/5 (08057 \$39.98) have been noted as available in the USA during May.

Due for reissue in the UK in the near future will be the Boeing P-12E, Boeing F4B-4 and Curtiss BF2C-1. We do not have any confirmed release dates or prices for these as yet.

AMT/Ertl

1/72nd

Note that the Thunderbirds Flight Display (#6325) and the Lockheed AC-130U Gunship (#8326) that were listed as being deleted in the April issue will remain available in the UK.



Released in the USA recently was the F-117A Stealth with ground crew set. This set retails for \$20.25.

1/48th

The Curtiss P-40K Warhawk (#8794) and Grumman F7F-2/2N (#8844) that were also listed as deleted in the April issue will become available again in the UK during June via the new AMT/Ertl distributor, Amerang Ltd.

Fujimi

1/48th

Apparently a number of the kits listed as deleted in the April issue from this manufacturer will, in fact, remain available in the UK. Amerang, the UK importers of the range inform us that the following kits, although deleted from the Fujimi catalogue, will still be available from them:

30101 Messerschmitt Bf 109G/K
30102 Mitsubishi A6M2 Zero
30103 N.A. P-51D Mustang
30104 Focke Wulf Fw 190A-6/9
30105 Supermarine Spitfire Mk V
30106 Focke Wulf Fw 190D-9
30107 LTV F-8D Crusader
30108 Douglas A-1H Skyraider
30109 Messerschmitt Bf 110C/D
30110 Grumman F6F Hellcat



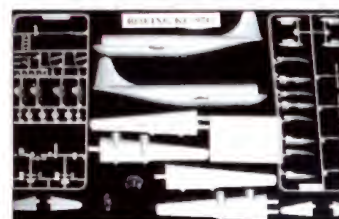
30111 Northrop F-5A Freedom Fighter
30112 Douglas A-4E Skyhawk
30113 Dassault Mirage IIIC
30114 Dassault Mirage IIIR
30115 Douglas TA-4F Skyhawk
30116 Bell AH-1S TOW Cobra
30117 Bell AH-1J Sea Cobra
30118 Bell UH-1N Iroquois
30119 Westland Wasp
30120 Sud Alouette III

Minicraft Models



1/48th

The new injection moulded kit of the Grumman XF5F-1 Skyrocket from this company was released in April. The kit features very good interior and engine details and it retails for \$20.96 in America and £13.95 in the UK.



1/144th

The new models of the C-97 and KC-97G tanker have both been released. The UK retail price for each is £8.99.

Aires

1/72nd

A new set of undercarriage bays for the Hasegawa Beaufighter has just been released by this manufacturer. These resin inserts retail for £3.50 a set.

1/48th

A resin and etched brass cockpit detail set for the Messerschmitt Bf 109K has also been released. We suspect that this set is for the existing Fujimi kit, as the Hasegawa one is only just becoming available. The set retails for £5.70.

Dekno

1/72nd

The Shorts-Bristow Crusader that we featured in the Preview section last month is now officially available in the UK. Examples can be obtained from Hannants and retail for £17.00.



ExtraTech

1/72nd

The most recent detail sets from this company are for the Mitsubishi A6M5c (Hasegawa) and the Lockheed TF-104G (Revell). Each set (#72075 & 72078 respectively) is available in the USA for \$6.95 each. The range can be obtained in the UK from Aeroclub and Four Plus UK.

AML

1/72nd

The two-seat Mitsubishi A6M2-K has been released by this manufacturer recently and it was followed by the Fiat G.50 Series I. Each kit is limited-run injection moulded plastic with etched brass details and the latter one currently retails for £8.50.

Academy

1/72nd

The next kit due from this source should be the Curtiss P-40M/N. This new tooling will retail for £4.99, although we have no confirmed release date as yet.



(© E.Malo)

1/48th

The Dassault Mirage IIIC and Dassault Mirage IIIR have been released in this scale. Each kit retails for just £5.65.

Alliance

1/72nd

This is a new resin kit manufacturer, but having had a look at the kits themselves, the casting looks very similar to that seen in other Czech products (e.g. Planet). The first two kits released are the Rogozarski XIV seaplane (£22.95) and the Heinkel He 72B with skis (£12.65).



Mister Kit

1/72nd

As a correction to the details listed against the kits due from this manufacturer in 1999 that we included in the April issue, please note that the Fiat CR.42 and Reggiane Re.2005 are injection moulded plastic kits with resin detail parts and decals (not resin kits as stated). The Macchi C.205 conversion listed is resin and is designed for the Hasegawa C.202 kit. Also due is a correction and detail set for the standard Hasegawa C.202 kit and this too will be in resin.

HR Models

1/72nd

The next resin kits due from this manufacturer will be the Polikarpov UTI-2 (£14.40), Aviatik Berg D.II (£13.50), Gloster Gauntlet with Finnish markings (£13.50), Aviatik Berg D.I (£13.50), Port Victoria PV-7 Grain (£12.90), Martinsyde S-1 (£12.90), Fokker M.7 (£13.50), Polikarpov I-16/1 (£14.40) and Polikarpov I-16/4 (£14.40). A number of these include decals, with the Fokker M.7 also including etched detail parts.

Tamiya



1/48th

A slight slip while typing up the 1999 new kit listing for the April addition resulted in the Fairey Swordfish from this manufacturer becoming a Mk II, where in fact it should have been a Mk I!



Apologies to all concerned for this error and just to whet your appetite more, here are some shots from Tamiya Inc. of the prototype cockpit and engine components. There is no confirmed delivery date as yet on this kit, but we will keep you posted.

Revell®

1/144th

The Panavia Tornado ECR 'Tigermeet' is now available from this manufacturer and it retails for £5.95.

1/72nd

The Italeri tooling of the F/A-18E Super Hornet is now available under the Revell label for £9.95.



Supermodel

1/72nd

It has been a good few years since the Aeromacchi MB-339 kits were announced by this manufacturer and in April they arrived. The versions released are the MB-339 PAN 'Frecce Tricolori', MB-339A two-seat and MB-339K and they each retail for just £6.00.

Historic Plastic Models

1/48th

The next kit listed for release by this manufacturer is a North American P/F-51? I suspect that the version will either be an H or maybe the XP-51F?

Planet Models

1/72nd

The next resin kit from this company will be the Mitsubishi Ki-83 and it will retail for £29.00.

Sharkit

1/72nd

The most recent resin kit from this manufacturer is the X-24C, which retails for £30.00.

Spin

1/48th

This new manufacturer's first release was the SVA.5 a short while ago and this has been followed by a similar resin and etched brass kit of the Bristol M.1C. This kit includes RFC markings and examples can be obtained from Hannants for £24.99.

Revell-Monogram

1/48th

Unfortunately it looks as if the release of the Dornier Do 217 will be postponed until next year now. This is a shame, as we are all looking forward to its arrival. Also the Ta 154 and F-84 are listed for release during the third quarter of 1999 (July-Sept).

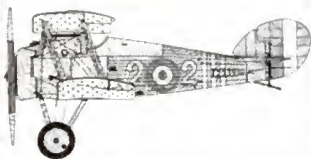


(© E.Malo)

Monogram

1/48th

The all-new tooling of the McD D F-15E from this manufacturer is now listed as being due in the final quarter of 1999 (Oct-Dec).



Sopwith 7F.1 Snipe

Manufacturer: Copper State Models
Scale: 1/48th **Price:** \$64.99
Panel Lines: Recessed ✓
Status: New Tooling ✓
Type: Resin, White Metal & Etched Brass
Parts: Resin 10, Metal 33, Etched 66, Acetate 6
Decal Options: 2
Manufacturer: Copper State Models
 3245 E. Hillery Drive, Phoenix, AZ 85032, USA
 Tel: 602 867 8822
UK Source: Aeroclub



Arado Ar 240

Manufacturer: MPM/HML
Scale: 1/48th **Price:** £60.00
Panel Lines: Recessed ✓
Status: New Tooling ✓
Type: Resin & Vac-formed Clear
Parts: Resin 78, Clear 2
Decal Options: 2
Manufacturer: MPM s.r.o., V.Hodkovickach 2,
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 Tel: +42 2 402 26 73, +42 2 402 25 53 or
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 Fax: +42 2 402 25 52 or +42 2 402 25 54
 Email: office@mpm.cz or export@mpm.cz



Nakajima A1N1

Manufacturer: Choroszy Modelbud
Scale: 1/72nd **Price:** £TBA
Panel Lines: Recessed ✓
Status: New Tooling ✓
Type: Resin
Parts: Resin 37
Also Included: Clear Plastic Sheet
Decal Options: 1 (& A1N2 option)
Manufacturer: Choroszy Model-Bud, 32-
 070 Kraków, Czernichów 371, Poland.
 Tel/Fax: 048 12 647 09 94
 Tel: 048 12 270 26 79



North American F-100D Super Sabre

Manufacturer: Revell®
Origin: Itali (Italy)
Scale: 1/72nd **Price:** £8.95
Panel Lines: Recessed ✓
Status: New Tooling ✓
Type: Injection Moulded Plastic
Parts: Plastic (Grey) 68, Clear 2
Decal Options: 2
Distributor: Revell® Binney & Smith
 (Europe) Ltd, Amptill Road, Bedford,
 MK42 9RS
 Tel: 01234 360201 Fax: 01234 342110



CAMS-30E

Manufacturer: Choroszy Modelbud
Scale: 1/72nd **Price:** £TBA
Panel Lines: Recessed ✓
Status: New Tooling ✓
Type: Resin
Parts: Resin 52
Also Included: Clear Plastic Sheet
Decal Options: 1
Manufacturer: Choroszy Model-Bud,
 32-070 Kraków, Czernichów 371, Poland.
 Tel/Fax: 048 12 647 09 94 Tel: 048 12 270 26 79



Kawasaki Type 93 Ki-3

Manufacturer: Choroszy Modelbud
Scale: 1/72nd **Price:** £TBA
Panel Lines: Recessed ✓
Status: New Tooling ✓
Type: Resin
Parts: Resin 57
Also Included: Clear Plastic Sheet
Decal Options: 1
Manufacturer: Choroszy Model-Bud,
 32-070 Kraków, Czernichów 371, Poland.
 Tel/Fax: 048 12 647 09 94 Tel: 048 12 270 26 79



Rumpler C.I

Manufacturer: Choroszy Modelbud
Scale: 1/72nd **Price:** £TBA
Panel Lines: Recessed ✓
Status: New Tooling ✓
Type: Resin
Parts: Resin 47
Also Included: Clear Plastic Sheet
Decal Options: 1
Manufacturer: Choroszy Model-Bud, 32-
 070 Kraków, Czernichów 371, Poland.
 Tel/Fax: 048 12 647 09 94
 Tel: 048 12 270 26 79



MBB 117 'Medicopter'

Manufacturer: Revell®
Origin: Matchbox (UK)
Scale: 1/72nd **Price:** £4.95
Panel Lines: Recessed ✓
Status: Revised Tooling ✓
Type: Injection Moulded Plastic
Parts: Plastic (Yellow) 65, (Black) 7, Clear 11
Decal Options: 1
Distributor: Revell® Binney & Smith (Europe)
 Ltd, Amptill Road, Bedford, MK42 9RS
 Tel: 01234 360201 Fax: 01234 342110



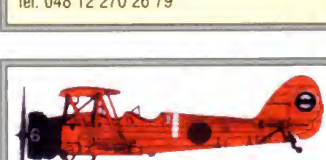
Messerschmitt Me 21A-0

Manufacturer: LF Models
Scale: 1/72nd **Price:** £TBA
Panel Lines: Recessed ✓
Status: New Tooling ✓
Type: Resin Etched Brass, Metal &
 Vac-formed Clear
Parts: Resin 28, Etched 41, Metal 4, Clear 4
Decal Options: 1
Manufacturer: LF Models, Gagarinova 10,
 787 01 Sumperk, Czech Republic.
 Tel: +420 649 221232
 Fax: +420 649 212139
 Emails: tofi@sumperk.net.cz



Kawasaki Type 92 KDA-5

Manufacturer: Choroszy Modelbud
Scale: 1/72nd **Price:** £TBA
Panel Lines: Recessed ✓
Status: New Tooling ✓
Type: Resin
Parts: Resin 25
Also Included: Clear Plastic Sheet
Decal Options: 1
Manufacturer: Choroszy Model-Bud,
 32-070 Kraków, Czernichów 371, Poland.
 Tel/Fax: 048 12 647 09 94 Tel: 048 12 270 26 79



Tachikawa Ki-9

Manufacturer: Choroszy Modelbud
Scale: 1/72nd **Price:** £TBA
Panel Lines: Recessed ✓
Status: New Tooling ✓
Type: Resin
Parts: Resin 44
Also Included: Clear Plastic Sheet
Decal Options: 1
Manufacturer: Choroszy Model-Bud, 32-
 070 Kraków, Czernichów 371, Poland.
 Tel/Fax: 048 12 647 09 94
 Tel: 048 12 270 26 79



Polikarpov I-1 (IL-400b)

Manufacturer: ICM
Scale: 1/72nd **Price:** £5.49
Panel Lines: Recessed ✓
Status: New Tooling ✓
Type: Injection Moulded Plastic
Parts: Plastic 32 (Grey), Clear 1
Decal Options: 1
UK Importer: Pocketbond UK, PO Box 80,
 Welwyn, Herts. AL6 0ND
 Tel: 01707 391509 Fax: 01707 327466



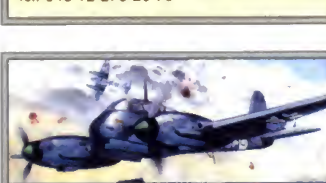
Albatros B.IIa

Manufacturer: Choroszy Modelbud
Scale: 1/72nd **Price:** £TBA
Panel Lines: Recessed ✓
Status: New Tooling ✓
Type: Resin
Parts: Resin 45
Also Included: Clear Plastic Sheet
Decal Options: 1
Manufacturer: Choroszy Model-Bud, 32-
 070 Kraków, Czernichów 371, Poland.
 Tel/Fax: 048 12 647 09 94
 Tel: 048 12 270 26 79



Morane Saulnier MS AR-35EP2

Manufacturer: Choroszy Modelbud
Scale: 1/72nd **Price:** £TBA
Panel Lines: Recessed ✓
Status: New Tooling ✓
Type: Resin
Parts: Resin 35
Also Included: Clear Plastic Sheet
Decal Options: 1
Manufacturer: Choroszy Model-Bud, 32-
 070 Kraków, Czernichów 371, Poland.
 Tel/Fax: 048 12 647 09 94
 Tel: 048 12 270 26 79



Messerschmitt Me 210A-1

Manufacturer: Revell®
Origin: Itali (Italy)
Scale: 1/72nd **Price:** £8.95
Panel Lines: Recessed ✓
Status: New Tooling ✓
Type: Injection Moulded Plastic
Parts: 87 Plastic (Grey), 5 Clear
Decal Options: 2
Distributor: Revell® Binney & Smith
 (Europe) Ltd, Amptill Road, Bedford,
 MK42 9RS
 Tel: 01234 360201 Fax: 01234 342110



Fisk 199

Manufacturer: A-Model
Scale: 1/72nd **Price:** £TBA
Panel Lines: Recessed ✓
Status: New Tooling ✓
Type: Limited-Run Injection Moulded Plastic
Parts: (White) Plastic 50, Clear 1
Decal Options: 1
Worldwide Enquiries: IBG, Warszawa, Poland
 Fax: 48 22 42 56 29
 Email: ibgsc@ibg.com.pl
UK Importer: Pocketbond UK, PO Box 80,
 Welwyn, Herts. AL6 0ND
 Tel: 01707 391509 Fax: 01707 327466



Yak-15

Manufacturer: A-Model
Scale: 1/72nd **Price:** £TBA
Panel Lines: Recessed ✓
Status: New Tooling ✓
Type: Limited-Run Injection Moulded Plastic
Parts: Plastic 55 (Grey), Clear 1
Decal Options: 2
Worldwide Enquiries: IBG, Warszawa, Poland
 Fax: 48 22 42 56 29
 Email: ibgsc@ibg.com.pl
UK Importer: Pocketbond UK, PO Box 80, Welwyn, Herts. AL6 0ND
 Tel: 01707 391509 Fax: 01707 327466



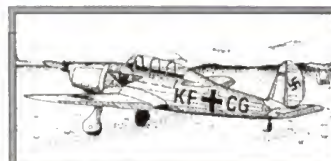
North American FJ-1 Fury

Manufacturer: Czech Models
Scale: 1/48th **Price:** £27.95
Panel Lines: Recessed ✓
Status: New Tooling ✓
Type: Limited-Run Injection Moulded Plastic, Resin & Vac-formed Clear
Parts: Plastic 29 (Grey), Resin 19, Clear 2
Decal Options: 2
Manufacturer: Czech Model c/o Squadron Products, 1115 Crowley Drive, Carrollton, Texas 75011-5010, USA.
UK Importer: Pocketbond Ltd



XF-85 Goblin

Manufacturer: Lumir Vesley
Scale: 1/48th
Price: £TBA
Panel Lines: Recessed ✓
Status: New Tooling ✓
Type: Resin, Etched Brass and Vac-formed Clear
Parts: Resin 38, Etched 5, Clear 1
Decal Options: 1
Manufacturer: Lumir Vesely, Konvova 174, 130 00 Praha 3, Czech Republic.



Arado Ar 96B

Manufacturer: Lumir Vesley
Scale: 1/48th
Price: £TBA
Panel Lines: Recessed ✓
Status: New Tooling ✓
Type: Resin, Etched Brass, White Metal and Vac-formed Clear
Parts: Resin 30, Etched 20, Metal 3, Clear 1
Decal Options: 1
Manufacturer: Lumir Vesely, Konvova 174, 130 00 Praha 3, Czech Republic.



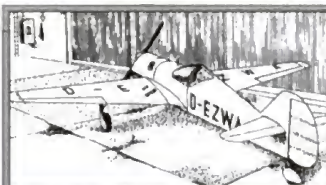
Yak-17

Manufacturer: A-Model
Scale: 1/72nd **Price:** £TBA
Panel Lines: Recessed ✓
Status: New Tooling ✓
Type: Limited-Run Injection Moulded Plastic
Parts: Plastic 55 (Grey), Clear 1
Decal Options: 2
Worldwide Enquiries: IBG, Warszawa, Poland
 Fax: 48 22 42 56 29
 Email: ibgsc@ibg.com.pl
UK Importer: Pocketbond UK, PO Box 80, Welwyn, Herts. AL6 0ND
 Tel: 01707 391509 Fax: 01707 327466



Hawker Tempest Mk V (Early Version)

Manufacturer: Eduard
Scale: 1/48th **Price:** £12.95
Panel Lines: Recessed ✓
Status: New Tooling ✓
Type: Injection Moulded Plastic
Parts: Plastic 70 (Grey), Clear 5
Also Includes: Die-cut Canopy Mask
Decal Options: 2
Manufacturer: Eduard M.A., 435 21 Obrnice 170, Czech Republic
 Tel: 420 35 6118259 Fax: 420 35 6118186
 Email: info@eduard.cz
UK Sources: Four Plus UK & Hannants



Skoda-Kauba V4

Manufacturer: Lumir Vesley
Scale: 1/48th
Price: £TBA
Panel Lines: Recessed ✓
Status: New Tooling ✓
Type: Resin, Etched Brass and Vac-formed Clear
Parts: Resin 19, Etched 4, Clear 1
Decal Options: 1
Manufacturer: Lumir Vesely, Konvova 174, 130 00 Praha 3, Czech Republic.



Arado Ar 396

Manufacturer: Lumir Vesley
Scale: 1/48th
Price: £TBA
Panel Lines: Recessed ✓
Status: New Tooling ✓
Type: Resin and Vac-formed Clear
Parts: Resin 26, Clear 1
Decal Options: 1
Manufacturer: Lumir Vesely, Konvova 174, 130 00 Praha 3, Czech Republic.



Pe-2

Manufacturer: Zlinek
Scale: 1/72nd **Price:** £11.35
Panel Lines: Recessed ✓
Status: New Tooling ✓
Type: Limited-Run Injection Moulded Plastic & Etched Brass
Parts: Plastic 99 (Grey), Clear 12, Etched 25
Decal Options: 2
Worldwide Enquiries: Zlinek, Druzstevni 4509, 760 05 Zlin, Czech Republic.
 Tel/Fax: + 420 67 44243
UK Source: Four Plus UK & Hannants



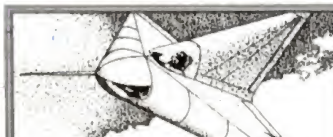
Hanriot HD.2 Floatplane 'ProfiPack'

Manufacturer: Eduard
Scale: 1/48th **Price:** £12.95
Panel Lines: Recessed ✓
Status: New Tooling ✓
Type: Injection Moulded Plastic & Etched Brass
Parts: Plastic 38 (Grey), Etched 29, Clear 1
Decal Options: 3
Manufacturer: Eduard M.A., 435 21 Obrnice 170, Czech Republic
 Tel: 420 35 6118259 Fax: 420 35 6118186
 Email: info@eduard.cz
UK Sources: Four Plus UK & Hannants



Piper PA-31-350 Chieftain

Manufacturer: Broplan
Scale: 1/72nd **Price:** \$10.00 + P&P
Panel Lines: Recessed ✓
Status: New Tooling ✓
Type: Vac-formed & Limited-Run Injection Moulded Plastic
Parts: Plastic 17 (Vac), 36 (Inj), Clear 3
Decal Options: N/A
Manufacturer: Broplan, ul. Pilotów 10G/33, 80-460 Gdansk, Poland
 Fax: 048 58 5565919
UK Source: Aeroclub & Andy Pack

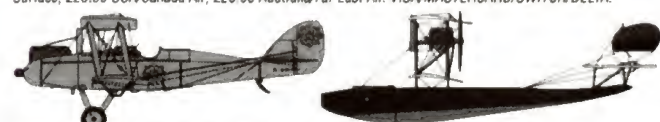


Lippisch DM-1

Manufacturer: Lumir Vesley
Scale: 1/48th **Price:** £TBA
Panel Lines: Recessed ✓
Status: New Tooling ✓
Type: Resin and Vac-formed Clear
Parts: Resin 26, Clear 2
Decal Options: N/A
Manufacturer: Lumir Vesely, Konvova 174, 130 00 Praha 3, -Czech Republic.

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Picture Pride

How many of us wonder how we are going to safely display the models we make? I know that I have a number packed in boxes in the loft, and that is not what this hobby is all about, they should be on display! I have hunted for quite a while now to find suitable display cases for my models, but with little success. Picture Pride Displays however have come to our aid with the release of their excellent free-standing display case designed for the Corgi die-cast collectables.

This unit is supplied for self-assembly and is flat packed. The packaging is excellent, which is good news considering what the Post Office will do to it, and assembly is straightforward. The base and sides are wood, into which slot two acrylic panels at either side. The shelves are supplied as safety glass, with ground edges for added protection. The back panel is then added and finally the top is fitted. The last thing to do, once you have added your collection into the unit, is to slide the

acrylic door across the front of the unit along its runners.

This cabinet is called the 'Corgi Aviation Cabinet' and measures 27cm x 53cm, while

each glass shelf is 25cm x 50cm with a pitch between each of about 9.5cm. The overall height of the unit is about 41cm, so it is a neat and compact unit offering a



good amount of display space for your models. Although not big enough for 1/48th scale and larger, the cabinet is eminently suited to 1/72nd and 1/144th scale aircraft.

An excellent product worth having, this cabinet is well made and finished and the Picture Pride range is quite extensive, so if you are interested in a display cabinet for your models, drop them a line and get one of their brochures. For those of you working in the larger scale, don't despair, Picture Pride even do a free-standing 30in square cabinet with four shelves, that is 5ft high!

Our thanks to Picture Pride for the review sample.

**PICTURE
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DISPLAYS**

Information

Worldwide Enquiries:
Picture Pride Displays Limited, 17 Willow
Court Crystal Drive, Sandwell Business
Park, Warley, West Midlands. B66 1RD
Tel: 0121 655 4946 Fax: 0121 552 9959

1999 Kit Listing - Update

Following on from our big listing of new kits for 1999, a number of additional new items have been passed to us, so here is an update of what to expect (we hope!) in 1999.

A&V RESIN

1/72nd (R)
Dewoitine D.520C
Kikusa Ki-59
Yak-50
Tachikawa Ki-54
Handley Page HP.75 Marx
A.W. 52
Tsibin NM-1
Mitsubishi Ki-57
Tachikawa Ki-74

Arthur (Flashback)

1/48th (Ltd/R/EB)
Aviatik Berg D.I
Erich Taube

Azur

1/72nd (Ltd/EB)
Heinkel He 45
North American NA-57/BT-9
Potez 452
Romeo 37bis

Blue Max

1/48th (Ltd/WM)
Sopwith Dolphin
Sopwith Snipe
Albatross D.III (Def) 53/153

Condor

1/72nd (IM)
Heinkel He 178 'Hi-Tech' §
Messerschmitt Me 163A 'Hi-Tech' §
Arado Ar 95W
Boulton Paul Defiant Mk I/NF Mk II
Boulton Paul Defiant Mk I/NF Mk II
Caproni Ca.303/310
Douglas DC-2
Focke Wulf Fw 189A-2
Focke Wulf Fw 189B

Focke Wulf Fw 58B
Focke Wulf Fw 58C
Hansa Brandenburg C.I
Heinkel He 50
Hispano HA 200/202 Saeta
Lockheed Orion
North American NA-64
Ryan PT-20/STM-S2
Ryan PT-20A/PT-22
Vultee V-1
Vultee V-11
§ = May contain EB & R

Cooperativa

1/72nd (IM/EB)
Fairley Swordfish (ex-Frog)

Eduard

1/48th (IM)
Nieuport Ni 17 'Vieux Charles'
Sopwith F.1 Camel
1/72nd
Fokker Dr.I
Iluyshin Il-2 'ProfiPack' §
1/144th
Focke Wulf Fw 190F-8
Focke Wulf Fw 190A-5
Messerschmitt Bf 109F
Messerschmitt Bf 109G
§ = Contains R and EB

Heller

1/72nd (IM)
Boeing E-3F/E-3B AWACS *
C-121A Constellation *
Canadair CL-415 *
N.A. F-86F Sabre *
Messerschmitt Bf 109F *
1/100th
Breguet Alizé *
Dassault Super Mystere *
Trident *
Vautour *

ICM

1/48th (IM)
MiG-3
1/72nd
Polikarpov I-16 Type 24
Sukhoi Su-2
Tupolev TB-3

MPM

1/48th (Ltd/EB/R)
Aero L-39C/ZO
Avia B-534-I
Avia B-534-IV
Curtiss AT-9 'Jeep'
Fieseler Fi-103 Reichenberg
Mörkö Morane
Bell P-63A 'Pylon Racer'
Bell P-63C 'Racer'
Bell P-63A 'Flying Red Horse'
Bell P-63F
Bell RP-63G 'Vee Tail'
Messerschmitt Bf 109T (Diorama)
1/72nd
Focke Wulf Fw 190S-5/S-8 #
Messerschmitt Bf 109G-12 #
Messerschmitt Bf 109H #
Messerschmitt Bf 109T #
Messerschmitt Bf 109 V1 #
Mitsubishi A7M2 Reppu #
Ryan XF-2R1 Dark Shark #

Pavla

1/72 (Ltd/EB)
Grumman F7F-3N Tigercat

RS Models

1/72nd (R)
Curtiss Hawk 75A-7
Curtiss Hawk 75H
Curtiss Hawk 75N

Special Hobby

1/48th (Ltd/EB/R)
Arado Ar 96
Arsenal VG-33
Flettner Fl 265
McDonnell Douglas XF-85 Goblin

Mil Mi-1
Sack AS-6
Sikorsky R-4
1/72nd
Berlin Be 9
Flettner Fl 265
Göppingen Gö 9

Sword

1/72nd (Ltd/EB/R)
Stinson L-5 Sentinel
Consolidated OY-1/2

Zvezda

1/72nd (IM)
Bell P-39N Airacobra
Hawker Tempest Mk V
Iluyshin Il-4
Kamov Ka-28
Kamov Ka-27
MiG-23MF
MiG-31
Mil Mi-8T
Pe-2
Republic P-47D Thunderbolt
Sukhoi Su-39
Note: Some of the above may be reissues - not confirmed to date.

KEY

- * = Re-issue (with/without new decals)
- + = Revised or converted tooling
- @ = Conversion
- # = Update with new resin parts
- § = Note Below
- IM = Injection Moulded Plastic
- Ltd = Limited-run Injection Moulded Plastic
- R = Resin
- EB = Etched Brass
- WM = White Metal
- VF = Vac-formed Plastic

Kamov Ka-52 Alligator



Technical Data	
Manufacturer:	A-Model
Scale:	1/72nd Price: £TBA
Type:	Limited-Run Injection Moulded Plastic
Parts:	Plastic 144, Clear 9
Decal Options:	N/A
Manufacturer:	A-Model, Ukraine

The Kit

This is the first kit, in any scale, of the Ka-52, the two-seat version of the Russian Ka-50 Hokum. It is thickly moulded in a 'dirty white' plastic on six small sprues plus a single clear one. There is a lot of finely engraved panel lines and other surface detail and a great many small detail parts. There isn't much flash, but virtually all the parts need to be cleaned of either rough edges or mould seams, especially the smaller ones. Apart from the basic aircraft, the kit also includes a number of underwing armament options such as a variety of missiles, bombs, rockets, and a twin-barrelled cannon pod.

Instructions

The instructions cover four sides of A4 paper, beginning with a brief introduction (in Russian?) and a numbered plan of the sprues. Construction covers more than two pages with eight easy-to-follow exploded-

view drawings giving the part numbers and, where appropriate, the painting guide in both Russian and English. The final set of drawings shows the placement of all the decals provided. Also included were two sheets giving side and plan-view drawings of the Alligator and a diagram of the weapons-load options carried.

Construction

All parts are very firmly attached to the sprues so a degree of care and determination is required to remove them safely. Then, after the clean-up of parts before use (which is a bit of a pain) the general fit is surprisingly good. In all the stages of assembly, there were only two aspects which required any kind of 'surgery'. Firstly, a small amount of filler is needed on the upper nose and lower central section of the fuselage join to disguise a slight mis-match, followed by a little rubbing down and re-scribing of the panel lines. The second aspect was the cockpit rear bulkhead, which needed to be reduced a little in width and re-shaped to allow the fuselage halves to come together properly. There are a number of components which can be very fiddly to assemble such as the tiny forward fins on two of the missiles, the end plates on the AT-9 missile launch tubes and fitting the hand and foot rails around the cockpit area. The cockpit itself is very detailed, as is the contra-rotating main rotor, which includes all the main control linkages.

Accuracy

The source of the technical data is the Polygon Russian/English book on the Ka-50 and Ka-52. The 7.34m wing-span and overall

height of 4.9m scale down accurately to 10.1cm and 6.8cm respectively. The scale rotor diameter of 20.8cm is slightly oversized compared to 14.45m on the real thing, and consequently so is the overall length. The 'look' of the finished model superbly captures the lines of the impressive Alligator.

Colour Options

The only option available is the all-over matt black of the prototype machine, as used on the Kamov company's Ka-50 'Werewolf' and 'Shark' single-seater demonstrators.

Decals

The sheet contains almost 200 individual subjects, printed on thin carrier film with a very flat finish. The printing itself is very crisp with no mis-registration and good depth of colour. As a prototype there are no national insignia, but the sheet does include all the access panel outlines (sadly missing from all the other Ka-50 kits), titles, badges, warning signs and over 100 tiny stencils. Most of these smaller decals are grouped

together on one piece of carrier film and have to be cut out individually before use. With this many items to try to place on one small model, the placement diagram is very complicated and the whole decalling process can get very tiresome!

The panel outlines can be difficult to move into place and the thin carrier film, which initially showed up against the gloss black paintwork, disappeared when a coat of Micro Flat varnish was applied over the top.

Decal Rating = 9/10

Conclusion and Recommendation

This kit needs a bit of experience and more than a little patience, but is well within the capabilities of most modellers. After the parts have been cleaned-up they go together well, and the result is an excellent model straight from the box. I highly recommend this kit.

My thanks to A-Model for the review sample.

Fred Took



Henschel Hs P.87



Technical Data	
Manufacturer:	Planet Models
Scale:	1/72nd Price: £23.00
Panel Lines:	Recessed ✓
Status:	New Tooling ✓
Type:	Resin & Vac-formed Clear
Parts:	Resin 59, Clear 3
Decal Options:	1
UK Importer:	Hannants

The Kit

Yet another model from the seemingly inexhaustible vaults of the Luftwaffe 1946 projects. The kit is crisply cast in yellowish resin with some finely engraved panel lines and details. The large parts have some heavy

casting lugs that have to be cut away and some of the smaller parts are so small that they are hard to see on their thin web of resin. Vac-formed transparencies are provided but with no spares. Fortunately in this kit all of the parts are bagged - if only all manufacturers would follow Planet Model's excellent packaging.

Instructions

The instructions are contained on a fold-out double-sided A4 sheet giving a brief type history, three rather vague construction diagrams and a good three-view painting and decal placement diagram.

Construction

Construction starts as usual with the preparation of the parts. As already mentioned the large parts have some hefty casting lugs which need careful removal whilst the small parts can be cut from their web of resin with a sharp scalpel. Some very small resin parts are included such as rudder pedals and control yoke. I think these would have been much better if they had been made in etched and cast metal as they are very difficult to clean up. Assembly begins with the well detailed cockpit area which only needs careful painting and dry brushing to bring out all the detail. The completed cockpit assembly is a tight fit in the longitudinally split fuselage which, fortunately, is quite thick and can easily be thinned down to fit. The rest of the assembly is quite straightforward but will test the builder's ability to keep the many joints square to each other so everything looks level when viewed from the front. I needed a fair bit of filler to smooth out the canard and wing joints, but generally I found the fit of parts to be quite good. As already mentioned some of the small parts are a bit of a fiddle to fit but it all goes together well if you take your time. I decided not to use the very small axles provided for the main wheels as they were extremely small, so I just glued them

directly on to the main gear legs.

The vac-formed clear parts are very clear showing off the cockpit interior very well. The main canopy was quite easy to cut out and fit, but the curved bomb aimer's window was quite awkward to position as it has no positive location. I found it best to dry fit and trim it several times before fixing it into place with Humbrol Clearfix and filling the small gaps around its edges with the same.

Accuracy

As no prototype was ever built the question of accuracy does not really arise but I think it looks great. A small diagram of the Hs P.87 was found on Dan Johnson's Luftwaffe 46 Internet site quoting a length of 12.15m. This scales out at 168.75mm which is very close to the model's length of 169mm.

Colour Options

Only one colour option is given with RLM 22 under surfaces and RLM 77 with an overspray of RLM 22 in wavy lines on the upper surface. This is a 'what-if' machine anyway, so you can make your own choice if this does not appeal. As no paint manufacturer appears to make RLM 77 I left the upper surfaces in Halfords primer grey and used Humbrol matt black for the underside and the wavy lines.

Decals

The small decal sheet is produced by Propagteam and looks very nice, sharply printed and thin and glossy, but it's a devil to use! As they are so thin and stick extremely well you have to be very accurate with your placement because you get no room for manoeuvre, they do not slide! I managed to ruin the fuselage codes and crosses trying in vain to slide them into position. They curled up and I was left with a screwed-up mess, so it was time to raid the spare decal box, and when this failed, to turn up some suitable substitutes. I managed to use the rest of the decal sheet as I'd got the hang of using them by now and I must say they are very good when you get them right.

Decal Rating = 10/10 (for appearance),
5/10 (for ease of use)

Conclusion and Recommendation

As you can probably tell by now I liked this kit and the subject. It is not difficult to make and the time spent on it will be well rewarded with an eye-catching result. I would not recommend this kit as a first resin project but would have no hesitation in recommending it to anyone with a couple of resin kits under their belt. At £23 it is quite expensive considering its size but I can give it my highest recommendation for the experienced modeller.

My thanks to Planet Models for the review sample.

Michael Cook



North American F-100D Super Sabre



Technical Data

Manufacturer: Italeri
Scale: 1/72nd **Price:** £7.99
Panel Lines: Recessed ✓
Status: New Tooling ✓
Type: Injection Moulded Plastic
Parts: Plastic 68, Clear 2
Options: Two styles of exhaust and in-flight refuelling probe
Decal Options: 3 (USAF, French & Danish A.F.)
Manufacturer: Italeri Spa, Via Pradazzo 6, Calderara (BO), Italy
UK Importer: Richard Kohnstam Ltd, 13-15a High Street, Hemel Hempstead, Herts HP1 3AD
Tel: 01442 261721

The Kit

Presented in one of those horrible end-opening boxes but with an eye-catching picture of a USAF F-100D on the top, this kit is well moulded in light grey plastic with neatly engraved panel lines and details. It is a real pity that once again the clear parts are not separately bagged and are left loose in the box to get scratched. Although this kit is supposed to be a new tooling it is very similar to the AMT F-100D in both style and parts breakdown but having compared the two I must say that the Italeri kit is much crisper. A full complement of underwing stores is provided but no options.

Instructions

The large fold-out multi-lingual sheet gives a brief type history, parts map and six diagrammatic assembly steps. Colour references are given for Model Master paints as well as FS numbers. A full colour painting guide is given on the bottom of the box for

two options to be used in conjunction with the diagrams on the construction sheet.

Construction

Construction starts with the detailed cockpit assembly which includes a reasonable three-part ejection seat which can only really be improved by careful painting, dry brushing and the addition of seat belts. Frank T. Cuden's article in SAMI Volume 4 Issue 8 (August 1998) is of great help here. Before joining the fuselage halves together, don't forget to add the suggested amount of weight, 20 grams, to prevent a tail-sitter.

The panel part number 24A is a poor fit and required filler and careful sanding to blend it in to the surrounding area. This of course destroys some of the surface detail which must therefore be restored. The one-piece lower wing also needs filler and sanding to blend it in to the bottom of the fuselage but the good news is that the upper wing to fuselage joints are perfect and need no filler at all. The only other problem area is the nose intake section which in my example did not fit well and again needed some filler to improve the fit.

These points aside, the construction is relatively trouble free apart from having to remove the annoying mould line along most of the smaller parts. Just make sure you select the right engine exhaust and refuelling probe for your chosen option. It is a good idea to cross-reference with photographs of the real thing. I used as my main reference *Exclusively Aircraft* Issue 3 (November 1992) which is well worth trying

to track down as it gives excellent coverage of the F-100 from photographs of the real thing, diagrams, plans and a comprehensive review of the kits available at that time.

From this reference I discovered that the arrester hook was not fitted to USAF F-100s until 1962 and therefore it would be inappropriate to fit it to the 1958 USAF option offered in the kit.

As already mentioned underwing stores are provided but these seem most appropriate to the USAF version. The bombs provided have a curious squared-off cross-section which needs some filing and sanding to a more accurate round cross-section before installation. Care must be taken when installing the main undercarriage doors to attain the characteristic X shape as shown in diagram 5 of the instructions. Construction finished, it's off to the garage to spray the model with Halfords grey primer and, as I have chosen the USAF option, good old Halfords Nissan silver (that's the free advertising over) which gives a good base for the natural metal finish of the original. Referring back to the Cuden article I was able to pick out some of the panels in Humbrol Metalcote paints and to reproduce the characteristic burn marks on the rear fuselage with pastel chalks. Johnson's Klear was then sprayed on to give a nice glossy surface for the decals.

Accuracy

The model certainly captures the look and poise of this classic aircraft but for the fastidious (by cross referencing several sources, none of which seem to agree), I

would say that the model is about 5mm short in length and about the same in wingspan. This could be my measuring however, and dimensions don't tell the whole story anyway.

Colour Options

The colour options provided cover USAF, Danish and French Air Force machines. The first two are in colourful natural metal schemes and the French example is in full camouflage with a great shark's mouth motif on the nose. Any of these options will result in a great looking model.

Decals

The decal sheet is excellent with spot-on register and good colour density. They are very easy to apply being both tough and thin. They bedded down well with Micro Sol and Set solutions and this was certainly needed on the USAF version to make the red nose and tail trim conform to the surface contours.

Decal Rating = 9/10

Conclusion and Recommendation

At about £8 this kit represents excellent value for money. I don't think I would recommend it to the absolute beginner but for someone looking for a little bit of a challenge, the problems this kit poses are easily overcome with basic modelling skills. For the superdetailer, this kit could form the basis of a very good model indeed. Overall this was a very enjoyable model to make and is highly recommended.

My thanks to Richard Kohnstam Ltd for the review sample.

Michael Cook



TS-8 Bies



Technical Data

Manufacturer: Broplan
Scale: 1/48th **Price:** £TBA
Type: Vac-formed and Injection Moulded Plastic
Parts: Plastic (Vac) 41, (Inj.) 46, Clear (Vac) 3
Decal Option: N/A
Manufacturer: Broplan, ul. Pilotow 10G/33, 80-460, Gdansk, Poland
UK Source: Andy Pack Models

The Kit

The TS-8 is a vac-form kit of an aircraft that I was not familiar with. The kit is vac-formed in white plastic and, as with previous samples from this manufacturer, could do with being slightly thicker for the main fuselage and wing parts. All panel lines are recessed but some are not very accurate and in places disappear altogether, so do require re-scribing. This is a delicate operation which would be safer on thicker plastic.

Instructions

The instructions are one double-sided A4 sheet. One side contains a series of plans with colour markings for a Polish Air Force

aircraft, but no date or unit information. The colours are named with English translations and details for Humbrol paints. The reverse side has an exploded diagram, part location diagram and a detailed view for the interior and main undercarriage well. There are also sketches of the interior forward cockpit areas and nosewheel assembly. The cockpit interior would need considerable scratch building to even approximate to the sketch.

Construction

Construction is standard vac-form practice starting with the internal floor and cockpit area. Surplus plastic from the vac-form sheet was used to strengthen the floor and undercarriage locations. The interior is very basic and is easily visible through the large clear canopy when completed. The nose and engine sections were crammed with lead as this aircraft would be a definite tailsitter otherwise, and it still is if the wind changes direction! The cockpit glass area and side windows all have to be cut out to be replaced later with the clear vac-formed canopy. The injection moulded parts are very brittle on large trees and with loads of flash. I damaged several getting them free. The propellers come as two blades which have to be fitted into the spinner. Finally I added the canopy after painting the aircraft. The canopy is very clear and a reasonable fit, except mine had a moulding flaw which caused a sunken ridge near the rear. There is

only one transparency which is a shame as it is very easy to over-trim and regret it!

Accuracy

The completed model measured 173mm long with a span of 218mm, whereas the dimensions given on the instruction sheet of 8.55m by 10.5m, would scale out to 178mm by 219mm. This makes the model quite accurate.

Colour Options

Only one colour option is given on the instruction sheet for the Polish Air Force in an all-over silver colour scheme with two number variations, but no unit or date details. I had no other sources for this aircraft so completed it in the suggested scheme.

Decals

The small decal sheet consisted of Polish insignia and numerals. Unfortunately, these disintegrated on contact with water so I had to complete the model by building up the decal pieces and hand painting the holes.

Decal Rating = 2/10

Conclusion and Recommendation

Overall this kit is a reasonable vac-form but will probably only appeal to those interested in Polish aircraft. It does build up into a pretty looking trainer, which I do like the look of. Recommended for the dedicated Polish Air Force followers.

My thanks to Broplan for the review sample.

Paul G. Gilson



Mil Mi-2 Hoplite



Technical Data

Manufacturer: A-Model
Scale: 1/72nd **Price:** £TBA
Type: Limited-Run Injection Moulded Plastic
Parts: Plastic 113, Clear 13
Decal Options: 8
Manufacturer: A-Model, Ukraine

The Kit

This is a new version of the rarely kitted Soviet-designed Hoplite light transport helicopter that was built in the thousands by the Russians and under license by the Polish Swidnik company. It is moulded in medium grey plastic on two tightly-packed sprues with some fine raised and engraved surface detail. There is heavy flash on some of the outermost parts and on my sample a pilot figure and missile hadn't formed properly during the moulding process. There are a lot of rails and struts which are not so finely moulded and may be better replaced by plastic card, rod or items from the spares box, nonetheless the parts are there if you want to use them. Finally, the kit includes a number of external options such as auxiliary fuel tanks, a fixed 23mm cannon,

bombs, missiles, and a choice of rocket pods that will allow a range of civil and military versions to be built.

Instructions

There is a plan of the sprue containing the smaller parts at the top of one of the two A4 instruction sheets. Two sides cover the construction with an exploded-view drawing of, first, the general assembly, and then assembly and fitting of the armament and accessories. Both include some common colours which apply to all versions. It is not always immediately clear where all the parts go from these two drawings, but it can be worked out with a little study and some good references. The other two sides provide the external painting guide for all eight options (except for the starboard side camouflage pattern for the Polish machine).

Construction

The cockpit is basic but adequate including seats, instruments, controls and even an ex-Airfix pilot figure! After removing the parts from the sprue with a fine razor-saw cutting away any flash, the edges of most parts need a little clean-up before they're ready for assembly. The general fit of all the major parts is very good, only the join of the tail to the fuselage requiring filler. There are locating points to help with the placement of some parts, but it's the small parts that cause the most difficulty. All the small antennae, footsteps, handholds and support struts have to be found (which is helped by the instructions giving the length of these parts in millimetres) and in some cases, these have to be assembled from three or four tiny parts!

Accuracy

The finished model captures the look of the real Hoplite very well and the rotor diameter of 47ft 9in and fuselage length of 39ft 2in scale down perfectly to 7.9in and 6.5in respectively. The model's height of 2.2 inches is 0.2 inches greater than the scale height, but most of this is due to the slightly oversize rotor head detail. The above dimensions were taken from the World Encyclopedia of Civil and Military Helicopters.

Colour Options

The kit offers eight colour schemes covering both the Russian and Polish-built versions. The choices include two camouflage options for a Czechoslovakian and a Polish machine, one German and one Czech Police force, a Czech SAR, a Russian civilian and a Russian military machine. The colour key is a bit simplified but can be understood and the 'FS' and 'RLM' numbers are given where appropriate.

Decals

The decal sheet contains 58 individual subjects on a thin carrier film with a very matt finish and they adhere well to the contours of the model. All the printing is very 'crisp' with good registration and depth of colour, and the carrier film becomes invisible once a top coat of varnish is applied. Careful handling is necessary as some of the smaller decals are prone to breaking during transfer to the model.

Decal Rating = 8/10

Conclusion and Recommendation

This is not the easiest of models to make but should be well within the capabilities of most modellers. The fit of parts, the fine surface detail and the range of options provided make this a highly recommended kit.

My thanks to A-Model for the review sample.

Fred Tooke



North American P-51B Mustang



Technical Data

Manufacturer: Revell®
Scale: 1/72nd **Price:** £2.95
Panel Lines: Recessed ✓
Fabric Effect: Raised ✓
Status: New Tooling ✓
Type: Injection Moulded Plastic
Parts: Plastic 51, Clear 2
Options: Bazooka rocket launchers and 75 gallon drop tanks
Decal Options: 2 (26th FS, 51st FG, USAF & No. 112 Sqd. RAF)
UK Importer: Revell® Binney & Smith, (Europe) Ltd, Ampthill Road, Bedford, MK42 9RS
 Tel: 01234 360201 Fax: 01234 342110

The Kit

The first Merlin-engined P-51 has been kitted before but most are now very old or, as in the most modern Japanese kit, very inaccurate in using a P-51D wing. The Revell kit is the latest in this company's investment in new moulds of classic aircraft. Moulded in dark green plastic, the parts are well detailed with nice touches such as woodgrain on the wooden cockpit floor. The instructions are Revell's usual style with paints coded to their own paint range. Construction is clearly illustrated in fourteen stages finished off with two optional schemes.

Construction

Before I started, I sprayed the kit in Halford's grey primer, as personally I hate coloured plastics and find them harder to paint over than the traditional grey plastic.

I cannot commend the detail highly enough; four parts and moulded sidewall detail form a nice little cockpit with the choice of decal or moulded detail for the instrument panel. The fuselage halves and cockpit were painted in AeroMaster interior green with details picked out in dark greys and black. When the fuselage halves were joined there was little in the way of cleaning up required. There is a choice of underwing loads and now is the time to open up the correct holes, clearly illustrated on the instructions. The wings, tailplanes and radiator inlets all fitted perfectly and the undercarriage bays were now painted in Humbrol aluminium with the rear wall in Aeromaster interior yellow. The undercarriage and tailwheel doors are interior green with the central panel of the main doors painted aluminium. The undercarriage is nicely to scale but the wheels could have done with a better definition between the hub and tyre, as I found it quite hard to paint (or are my eyes just getting older?)

The only items in the kit that need work are the exhaust pipes, as both styles supplied stick out too far from the fuselage. Just sand back the base a bit and they look a lot better. There are a pair of nicely detailed drop tanks, that fit onto separate pylons which feature minute sway braces. For the American option in the kit there is also a three-round bazooka rocket launcher to fit under the wings. These made a welcome addition to the spares box. The only hard area of construction in this kit is the propeller made up of a two-piece spinner and four blades. The locating pegs on the blades are small and it is difficult to make all the blades straight and have the same pitch angles. In 1/48th scale this would not be a problem but in 1/72nd it is just a bit too fiddly.

Accuracy

Detail and Scale P-51 Mustang Part 1 is a 'must have' for anyone who likes Mustangs. They list the dimensions as 32' 3" length and a span of 37' 1". The kit measures up almost exactly and lines up well to the plans supplied in the book.

Colour Options

Two schemes are provided, an American P-51B in Olive Drab and Neutral Grey and red spinner of the 26th FS 51st FG in China 1945. This aircraft has a shark's mouth and two yellow stripes on the tailplanes and tailfin or a Mustang III of No. 112 Squadron Royal Air Force in Italy during 1945. This aircraft is in Ocean Grey and Dark Green over Medium Sea Grey, and it also has a red spinner and shark's mouth.

Decals

Revell decals, love them or loath them, the debate goes on. These are a vast improvement, very thin and matt. They settled down well with Micro Sol and Set but there was a thin white surround to a number of images, most noticeable on the RAF roundels and fin markings. This was not apparent until they were on the model. The centres of the roundels are provided separately to ensure registration which is a nice touch.

Decal Rating = 5/10

(would have been more without the white edging)

Conclusion

The construction of the propeller prevents this kit from being the ideal introduction to plastic modelling. At £2.95 it is excellent value for money and knowing the life Revell® get from their moulds, I am sure we will see it around for many years. I hope it handsomely repays their large investment in tooling costs enough for them to consider other classic aircraft types. Recommended to all but absolute beginners.

Thanks to Revell®, Binney & Smith (Europe) Ltd. for the review sample.

David Francis



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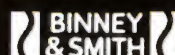
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Douglas F4D-1 Skyray

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Technical Data

Manufacturer: Tamiya
Scale: 1/72nd **Price:** £8.99
Panel Lines: Recessed ✓
Status: New Tooling ✓
Type: Injection Moulded Plastic
Parts: Plastic 65, Clear 2
Decal Options: 3
Manufacturer: Tamiya Inc.,
 3-7 Ondawara, Shizouka-City, Japan
UK Importer: Richard Kohnstam Ltd,
 13-15a High Street, Hemel Hempstead,
 Herts. HP1 3AD
 Tel: 01332 261721 Fax: 01442 240647

The Kit

When I first heard that Tamiya were scaling down their new 1/48th scale kits I was hoping that the Skyray would be among them, as the old Airfix kit formed the basis of my first 'theme collection' at the tender age of 8. Now older, but no wiser, I still think the Skyray is one of the most sexy aircraft ever made (Sorry Ed, I used the 'S' word). This 1/72nd kit comes with a photo of a made-up model which does not grab the attention as much as the excellent artwork on the larger-scale kits. Inside the box are no surprises: two sprues of grey plastic with nicely engraved panel lines and a good level of detail. Now this kit is not a direct scale-down of the 1/48th scale kit, as there are no separate slats, elevons or folding wings. This makes the kit a lot easier to assemble, but the 'elevons' and slats are normally deployed on parked aircraft, so a little work with a fine razor saw would improve the look of the model for the fastidious.

Instructions

These are in the normal Tamiya format, clear and concise with painting keyed to the Tamiya acrylic paint range.

Construction

I could say just follow the instructions as the kit assembles so easily. The cockpit is well detailed with a decal for the instrument panel and I drilled out the holes on the ejector rails with a fine drill. Before joining the fuselage halves a small fishing weight was put into the radome. The completed nose assembly was attached to the two-piece rear fuselage, and this join was perfect with no need for filler. I now sprayed the completed assembly and all remaining parts with Halford's white in preparation for the final finish. The undercarriage is nicely detailed and I just sanded small flats on the main wheels. The tailplane was attached next, but be careful of the small aerial on the rear edge as mine came off at least three times (the observant will notice it had disappeared again by the time of the photo).

The intakes were now fitted, and these needed a small amount of Kristal Klear to tidy up the join. A fine selection of under wing stores is provided in the form of two drop tanks, two rocket pods, two sidewinders and the centreline navpac, which contains the early navigation aids as they were too bulky to fit inside the fuselage. The drop tanks in this issue do not provide the refuelling probe found in the 1/48th scale Skyray though. Once construction was finished it was time to choose the final markings.

Accuracy

Externally the kit measures spot on the 44 ft length and 36 ft 6 ins wingspan quoted in Steve Ginter's Naval Fighter Series title on the Skyray, but there is an inaccuracy in the cockpit. The Skyray was originally delivered with a Douglas-designed ejector seat, which is provided in the kit, but later models had a

Martin Baker Mk P5 seat. This is easy to spot in most photos as the Martin Baker seat has a far bulkier headrest and the ejector rails cannot be seen. These are normally prominent on aircraft fitted with the Douglas seat. Also if we want to get really picky the instrument cowlings has the later head-up display normally fitted with the Martin Baker seat. Don't let this put you off though, Aeroclub have a Mk 5 seat in their range and you can fill the small hole in the cowlings if you fit the Douglas seat, or do what I did and don't bother. No-one will know except you, me and a couple of thousand others once they have read this!

Colour Options

All three options are in Gull Grey and white. On my model this was achieved with Halford's white and AeroMasters Gull Grey acrylic, the latter being brush painted onto the top surfaces. The leading edges were masked and treated with silver leaf rub and buff.

The colour options are the same as the larger Skyray kit. The first is the extremely colourful aircraft of VF (AW) 3 USN with a blue spine, tail and wingtips covered with yellow stars. The other two aircraft belong to marine units, the first, VMF (AW) 115, with the red and white stripes on wingtips, tail and fuel tanks and secondly, my choice, VMF (AW) 114 with a lightning flash on the drop tanks and the heart, diamond, club and spade symbols in a white flash on the rudder. Please note that this aircraft is the only one in the kit options that should have a Martin Baker seat.

Decals

These are thick and glossy but do settle well into the detail. I would advise cutting decals 9 and 10 into three parts as this red intake warning is extremely hard to fit in one piece. The blue and yellow stars of VF (AW) 3 are in one piece and it would be a brave modeller who tries this option. I will wait for Cutting Edge to scale down their 1/48th scale sheet, so that you paint the blue and add the stars! Full walkways and glare panels are provided in grey and black but no maintenance stencilling.

A word of warning: some of the markings reacted badly to Micro Set and had to be replaced or painted over, so I would not use this product on these decals.

Decal Rating = 6/10

Conclusion

Would I buy another one? A definite NO, I would buy six or seven! Admittedly I am a bit biased but it is a good kit of a colourful aircraft with many attractive finishes in the 20+ units that operated the type. I am sure that the aftermarket decal manufacturers will re-release or scale down sheets for this kit. Now Mr Editor, who do I have to kill/bribe to get a 1/72nd Skyraider when it is scaled down from 1/48th? The Skyray is suitable for all and is therefore highly recommended.

My thanks to Richard Kohnstam for the review sample.

David Francis



R.W.D. 13 'Polaca'



Technical Data

Manufacturer: Dekno
Scale: 1/72nd **Price:** £21.00
Panel Lines: Recessed ✓
Fabric Effect: Raised ✓
Status: New Tooling ✓
Type: Resin, White Metal & Vac-formed Clear
Parts: Resin 16, Metal 6, Clear 1
Options: Different starboard fuselage for R.W.D. 13S
Decal Options: 5 (Rumanian, Spanish, Yugoslavian, Polish and Palestinian)
Manufacturer: Dekno, rda general Mitre,
 215, 08023 Barcelona, Spain.
 Fax: ++ 34 93 415 23 08
UK Importer: Hannants

The Kit

This Dekno resin kit came in a stout box and the basic pieces were finely detailed with engraved panel lines, and fabric effect on the rear fuselage and wings. The cockpit doors and seats had a subtle representation of the upholstery, map pockets and handles. All the parts had a lot of flash and initial impressions, confirmed later, were that a lot of rubbing down and dry fitting would be necessary.

Instructions

These comprise four sides of A4 paper, with a brief history of the type in English and Spanish. The assembly instructions are simply an exploded diagram showing 1 projection of the two alternative versions of the plane which can be made. As this kit is quite simple the instructions are sufficient except in locating the undercarriage struts. Sadly no detail painting instructions are

given and the main colours are given only as light blue, light grey, olive green etc. with no FS or manufacturers references.

Construction

All the parts required trimming and careful rubbing down to achieve an accurate fit. I could not find any reference material or photographs of the real aircraft and so proceeded on the basis of feel for what was right. To that end I thinned the fin and rudder like a vacuum, to give a sharper edge, but I may have overdone it as the seats were then too wide for the fuselage. However, they were oversize even before I started thinning, so it is probable you would lose the nicely moulded sides anyway.

The large clear area of canopy cried out for some detailing of the cabin. I used the interior details for the "ZTS plastyk" model of the LWS-CZAPLA, the prototype of which was known as R.W.D.14. These indicated cockpit green generally so I used Humbrol acrylic 78, the leather parts picked out in Citadel "Snakebite Leather", matt black for

the instrument panel and aluminium for rudder pedals and joystick. I added rudder pedals and joystick from scrap plastic and Contrail mouldings.

The kit features separate mouldings of the doors and access hatch for the different versions, R.W.D.13 and R.W.D.13S. I chose to make the R.W.D.13 and had I been able to find further details would have modelled it with the doors open.

The glazing of the kit presented this reviewer with a challenge, and I never did get the canopy to fit. The doors and side windows were glazed with the acetate sheet. The smaller door panels were filled with Clearfix and all clear parts fixed with Clearfix, which was especially useful in making the canopy look nearly right!

The review kit did not have handed undercarriage struts, but by carefully bending the white metal of one set I managed to achieve an acceptable result.

Accuracy

The only dimensions I could obtain were

those given in the instructions. The finished kit scales out at 150mm too long and 300mm too short in span but looked OK to my dodgy eyes.

Colour Options

There are five options given in the instructions, for Polish, Palestinian, Rumanian and Spanish-operated examples and a licence-built Yugoslavian version. The colours as previously mentioned are listed by shade only. Choosing the Spanish version the main colour was light grey and I used Humbrol 64, the markings not supplied being masked and painted using Tamiya matt black and white all being applied by brush. The wheel hubs were picked out in aluminium, the tyres in AeroMaster tyre black and the propeller in Horizon Red/Brown.

Decals

Decals were supplied for all five versions, and they are very glossy with noticeable carrier film. I trimmed them carefully, remembering to apply the tailfin crosses before the tailplanes. They all went on very easily using a little Microset. Noticing a little damage to the tail crosses due to handling, I touched them up and sealed the complete kit with Johnson's Klear. Some silvering was evident which I expect could be reduced by using gloss finish paints and sealing with matt varnish. Painting the Spanish version could be made easier by the inclusion of white wing crosses.

Decal Rating = 7/10

Conclusion and Recommendation

Like a lot of limited-run resin kits, a good deal of work was required to achieve an

acceptable result. I used a lot of filler to even up the fuselage halves and felt Dekno could have given more thought to the assembly and painting instructions to enable the modeller to detail the interior. However, as a basis for a model representing both an unusual type and smaller air forces I give this kit a

Recommended for the intermediate modeller, but only if you can put up with the price!

My thanks to Dekno for the review sample.

Simon Batchelor



North American O-47A



Technical Data

Manufacturer: AML
Scale: 1/72nd **Price:** £8.95
Panel Lines: Recessed ✓
Status: New Tooling ✓
Type: Limited-Run Injection Moulded Plastic, Etched Brass & Vac-formed Clear
Parts: Plastic 50, Etched 25, Clear 6
Decal Options: 1
Manufacturer: AML, Ke studánce 1048, 735 14, Orlová-Lutyne, Czech Republic
Sample Supplier: Hannants

The Kit

Opening the box gives no immediate clue to the little gem, with its strong family resemblance to the later T-6, which can be created from this kit.

The injection parts, which include a complete interior, are in fine, soft plastic cast on a single sprue slightly smaller than A4 size. Surface detail is fine, but injection mould lines, thick trailing edges and mating surfaces require careful cleaning up before assembly.

Etched brass components are of high quality as are the acetate transparencies, which are well moulded with sharp raised framework. Two canopies are provided against accidents, but only one set of observation windows are supplied.

Instructions

With almost total reliance on diagrams, the instructions are just adequate given the comparative obscurity of the type and the lack of detailed pictures available to the modeller (check the Smithsonian Paul E. Garber web site via www.si.edu/nasmdocs/, if you can).

Two A4 sheets are folded to give eight pages of information containing a brief but

informative type history, sprue and parts diagram, paint colour key with Humbrol reference numbers, ten-stage exploded-view construction sequence and three-view decal drawing. The box gives a useful four-view off-scale colour plan to assist in final finishing in the scheme apparently used by one of the few examples of the type to see combat in the Philippines in 1942.

Construction

I opted not to follow the instruction sequence detailed in the instructions, which begins with the assembly of the detailed interior for pilot, co-pilot/observer/camera man and gunner complete with floors, seats and bulkhead frames, until I was sure that the main parts would fit the fuselage internal dimensions. Although the inner fuselage surfaces have detail moulded on, the locations of the main bulkheads and floors are not clearly marked and a degree of caution seemed prudent.

So I started at stage 8 separating the fuselage halves and rubbing the mating surfaces on emery paper, just like a vacuum, to ensure a good fit. I then matched the main internal components in their locations, before completing the delicate sub-assemblies as detailed in the instructions.

In the event, the innards fitted surprisingly easily after a couple of dry runs to ensure correct location and snug fit.

The wings were rubbed down in the same way as the fuselage halves to ensure a good fit and sufficiently refined trailing edges. Wing/fuselage locate by a butt joint (with only the wing and fuselage recesses for the under-wing observation windows providing positive reference points), which looks awful, but in the event proved to work well.

However, it's very much up to the individual modeller to test fit to ensure that both sides match up in location, dihedral and incidence.

Be careful when cutting the observation windows (Part Nos 51 and 52) that effectively double as the lower wing fuselage fillet. It's not immediately clear from the diagram or box art that the triangular portions fore and aft form essential fairings, which need careful

trimming so that the window fits the wing/fuselage aperture and the triangular fairings flush fore and aft. This is probably the hardest part of the kit to get right and unlike the main canopy there is only one moulding of each. I resorted to superglue and Milliput and claim a moral, if not entirely convincing, technical success.

Ideally the canopy should be cut to expose as much of the internal detail supplied as possible, but I opted in the interests of speed to model it closed using a new American product called 'Mask it Easy' prior to spraying as an alternative to conventional masking. In the event my reluctance to use a scalpel on the flexible acetate, when removing the mask, resulted in a ragged edge to the framing which could have easily been avoided.

Tamiya acrylics were used for the olive drab and neutral grey main airframe colours, with a mixed bag of enamels used for all other purposes.

After painting, the decals and detail were added in the usual way.

Accuracy

Probably very accurate!

The Smithsonian Institution, National Air and Space Museum gives the span as 46.5 ft and length as 34 ft and the model has a scale span of 46.5 ft and a length of 34.125 ft. Just as importantly AML's kit captures the proportion and look of the original. So whilst I have not been able to compare the outline with proven scale plans, there is no evidence of inaccuracy.

Decals

Though in general sharp, well printed, in

register with good density and adhesion, two of the national insignia decals had annoying white crescents showing on part of the circumference, which is difficult to correct convincingly.

Alternative, brighter pre-war schemes may be more attractive to some modellers than the Olive Drab combat scheme and AML may have missed a trick here.

Decal Rating = 7/10

Conclusion and Recommendation

This is a worthy model of the original, which was a technically competent design to a suicidal 1935 specification and made in sufficient numbers to help establish North American and enable it to go on to produce the T-6, P-51 and B-25.

One of the few truly 'baroque' aeroplanes of American vintage with its pigeon chest and 'bay window' under-wing/fuselage fillets this kit is an absolute delight. Certainly it has the appearance of an ugly duckling when the box is opened but it turns nicely into a swan as construction proceeds.

Never intended to fall together under the hands of a beginner, this kit responds to care and patient refining of the mouldings, which have a commendably refined surface, and internal detail ensure a good fit.

At £8.95 it sets a high standard in limited-run kits and I have no hesitation in recommending it wholeheartedly to modellers who have progressed beyond the beginner stage.

My thanks to Hannants for the review sample.

Simon Snape



Bell OH-13S Sioux



Technical Data

Manufacturer: Italeri
Scale: 1/48th **Price:** £9.99
Panel Lines: Recessed ✓
Status: New Tooling ✓
Type: Injection Moulded Dark Green & Clear Plastic
Parts: Plastic 90, Clear 4
Options: Two styles of skid and fuel tanks, M60s mounted on skid for one option.
Decal Options: 3 (US Army, British Army & Italian A.F.)
Manufacturer: Italeri Spa, Via Pradazzo 6, I-40012 Calderara di Reno, (Bologna), Italy. Tel: +39 51 726037
UK Importer: Richard Kohnstam Ltd Tel: 01442 261721

The Kit

Three versions are offered in this kit: American Army, Italian Air Force and British Army, of which I chose the latter. The kit is geared towards building the American version so some additional research is necessary to note the differences.

The kit is moulded in dark green plastic (yeeuch!) and consists of a total of 90 parts, four of which are clear. A little flash is evident, especially on the rear fuselage parts, but nothing major. Due to the nature of the construction of this aircraft, the kit has some delicate parts and therefore should be handled with care, especially when removing them from the sprues. One problem, due to the sprues not being wrapped in the box, is that my sample had the main bubble canopy badly scratched and this led to a lot of work to bring it back. Due to the rather 'open' nature of this machine, there is a great deal of scope for adding detail, especially around the cockpit and engine areas.

Instructions

I found these tended to be vague, mainly where the layout was concerned. They consist of five A5 double-sided sheets with nine main numbered sections and 22 sub-sections (some lettered, some not). I felt that this was confusing so careful study of these is required before you start. The exact location of some parts is also difficult to ascertain.

Assembly

This starts with the engine and is fairly straightforward once you work out the instructions. The only awkward thing I found with this assembly was part No.17B (part of the exhaust), of which the location is vague. Part 2A, a drive belt and pulleys, seems to 'stick into mid air' and this is because it will be located at a later stage.

Next step is to assemble the cockpit, which presented no great problems. Note that part 20B is shown as mounting onto a 'ridge' on part 19B, whereas it is actually mounted on two pegs. A small amount of

filler will be required on the join between parts 28B and 26B, and at this point trial-fit the bubble canopy to ensure a good fit (the positioning of part 28B is crucial here). I didn't, as I was following the instructions, and leaving until last resulted in my having problems. This was part of the reason I omitted the doors although this aircraft would occasionally fly without them. Remember to assemble part 22A (rudder pedals) to 21B (cockpit floor) before inserting them into the main cockpit tub. Note that part 85A (blade aerial) shown in stage 7 of the assembly should be mounted on the right and alongside part 29A, at the same distance as the search-light on the other side. Seat straps could be added here. However I decided to omit them as I would have preferred to use after-market items rather than scratchbuild.

The next stage concerns the rear fuselage: handle this with care and there will be no problems. I used Plastic Weld to join the two halves (parts 31B and 35A) and from then on superglue. The location of part 34A is not clear but appears to attach underneath, behind where the engine will mount.

Following on to stage 4 I found some problems. Part 41B is used on the Italian and American versions and I believe this was a battery (according to my references). On the British AH.1 the battery/radio box was mounted slightly aft, between the fuel tanks on top of the fuselage, and therefore part 86A (which the instructions state should not be used) should in fact be mounted in the position described! The main problem I found at this stage is that the engine appears to sit too far aft (approx. 1mm on my sample). If the engine is mounted according to the instructions, parts 50B and 51B will not locate correctly. The best way I found to correct this without major surgery was to remove the locating ridge from the bottom of the engine and move it slightly forward where it should mount on part 33B, using superglue to keep it in place. This will enable the frame (parts 50B and 51B) to sit correctly in front of the

locating pegs. Using the above method to correct this ensured that it was hidden and didn't detract from the finished model. Stage 5 is straightforward, just make sure you locate the frame (sub-assembly E) in front of the locating pegs. Stage 6 is again straightforward. Use the smaller fuel tanks for all versions (parts 54B, 55B and 56B) and omit part 63A if building the British version. All reference photographs I found did not have this blade aerial mounted, only the one under the cockpit as mentioned previously.

Assembly stage 7 involves mounting the skids. If you are building the American version this is easy as they are one-piece. The British version has four parts to assemble; there is a left and a right skid, and the supports which mount to the main fuselage should slope to the REAR. This is not clear on the instructions.

Stage 8 is divided into three sub-sections, assembling the machine guns and mounts (for the American version only) and the main rotor and rotor head. The final assembly stage involves mounting the machine guns (American only), the main rotor and canopy bubble. With part 80C, the main bubble canopy, I used thin painted tape to represent the frame and also applied the decal (a thin yellow stripe) before attaching it to the main fuselage. One final prominent feature I did add was the aerial mounted just forward of the tail rotor.

Accuracy

Various sources suggest the rotor diameter for this aircraft was 11.32m, while the instructions say 11.27m. Working on the former I found the kit scaled out nearer to 1/50th scale, so it is slightly under scale. This does not however detract at all from the finished model.

Colour Options

Paint references are given by Federal Standard specifications and the Model Master paint range. The engine assembly calls for silver to paint metal parts, but I considered this too bright. I used Xtracolor Duralumin, which is a 'grey silver', on all parts that called for 'silver'. The cockpit interior was painted using Xtracolor Interior

Green with Humbrol 155 for the seats. The instrument panel was painted using Humbrol matt black, with details drybrushed in silver. For the rear fuselage the instructions suggest Olive Drab, but during my research I found that the British helicopters were normally painted the same green front and rear, and therefore I used Humbrol 117 (this translates from the Model Master 1701). The same green was used for the front fuselage and fuel tank camouflage. The Brown used here was Humbrol 186. These colours at first seemed wrong to me but I found a colour photo of a British Army helicopter from the same period and they are in fact quite a good match! Other colours used were Humbrol matt black, white, red, brick red, rust and yellow. The brick red and rust incidentally were used to paint the exhaust system, as I didn't agree with the prescribed matt black.

Decals

The decals presented no problems at all, as they were of good colour density with little or no carrier film and reacted nicely to Micro Sol solution. Decals were also provided for the main and tail rotor safety markings, but do note however that an extra black stripe needs to be painted on the tail rotor.

Decal Rating = 9/10

Conclusion and Recommendation

Apart from the extra research required for the British version (all part of the fun!) I think this kit built into a nice representation of the Sioux. Some parts are probably slightly over scale (rear fuselage) due to moulding limitations, but I thoroughly enjoyed putting this kit together. I would not however recommend this kit to an absolute beginner as it is quite delicate but I think most modellers would not have any problem.

My thanks to Richard Kohnstam Ltd for the review sample.

Andy Thomson



Sukhoi SU-17 'Fitter G'



Technical Data

Manufacturer: Bilek
Scale: 1/72nd **Price:** £TBA
Panel Lines: Recessed ✓
Status: New Tooling ✓
Type: Injection Moulded Plastic
Parts: Plastic 165, Clear 8
Decal Options: 3
Manufacturer: Bilek
UK Source: Hannants

The Kit

The kit consists of 165 grey injection moulded parts plus eight clear parts. There are two instruction sheets, one providing a parts breakdown and colour schemes while the other details construction. A decal sheet by Propagteam is also provided. The major components are located on four sprues and three parts are marked as not required for this version.

On first inspection the parts appear to be well moulded with engraved panel lines throughout. However some of the smaller parts have a very noticeable mould mismatch; this is most obvious on the weapon pylons and one-piece tailplanes. There were some surface blemishes on the wings, tailplanes and undercarriage doors. A clearly moulded four-part canopy is provided.

Instructions

The main instruction sheet is made up of four pages with ten assembly steps, a further twelve steps covering construction of the various weapons provided. An armament diagram shows various weapon configurations for this combat-capable trainer. A small chart covers interior colours using Humbrol and Testors ModelMaster equivalents. A separate sheet provides a small description of the real aircraft, a good parts-layout diagram and three colour-scheme options again using Humbrol and ModelMaster paints.

Construction

Assembly starts with the shock cone and bulkhead and moves onto the cockpit. Two

ejection seats are provided, each made from four parts and they appear to be based on the current Soviet K36 version. The ejection seats, when completed, look rather small and basic, and seat belts were added from wine bottle lead foil which made them look better. The two seats were then added to the cockpit tub which has side consoles but no detail is provided. The two joysticks look grossly overscale (more like 1/48th), and their housing is so wide that there would be no room for the aircrew's legs. Both parts were sanded down to a more scale appearance. Two instrument panels, with basic details, are provided and a square of clear plastic suffices for the head-up display. The fuselage halves are then joined together incorporating the shock cone, cockpit tub nose-wheel bay and sliding mechanism for the swing wings. I found that the cockpit tub was a very loose fit in the fuselage. No guidance is given for the amount of weight required in the nose area to prevent the model becoming a tail-sitter. I placed a small amount of lead solder under the cockpit tub which was sufficient.

A number of scrap views are provided on the instruction sheet to show the position of the two nose probes, two landing-light lenses (two 2.5mm diameter holes need to be drilled for these) and more awkwardly for the position of four air intakes and two chaff dispensers. A plan view and two cross-sections are provided for these parts and various angles are shown to help. Unfortunately nothing is moulded onto the fuselage parts to aid location.

The wings are added next which include a tongued part which fits into the sliding component which was fitted into the fuselage earlier. The wing movement is quite good, however the glove vanes needed to be thinned as they were too thick and restricted movement. Quite a lot of filler was required around the wing roots. The tailplanes needed quite a bit of cleaning up to remove the mismatch and there was a large ejector pin marking on the port lower tailplane which needed to be filled. Next the various pylons were fitted depending on which armament

options were chosen. Again positioning the pylons was vague with reference to the two side profiles and cross-section being required. All of the pylons needed cleaning up and filler was required where the pylons attached to the glove vanes.

Final assembly covers the undercarriage. The main-gear legs are made of five parts and look quite good, the doors however are provided in one piece with grooves moulded in to allow separation into three parts. Once separated I found that the parts for one door were different in size to the opposite door, and more care is needed when separating these parts. The positioning of the main-gear doors in relation to the gear legs is also vague, even though scrap views are provided. The stores include drop tanks, UV16-57 and UV32-57 rocket pods, a reconnaissance pod, jamming pods, gun pods, AA-8 Aphid air-to-air missiles, multiple ejector racks and two sizes of bomb.

Accuracy

The completed model measures 26.6cm long and has a swept wingspan of 14.5cm. The real aircraft has a length of 18.75m (including probe) and a swept span of 10.6m which is 1/72nd scale converts to 26.04cm and 14.72cm respectively. The model is reasonably accurate and looks the part when compared to photographs. My reference source was Warplane Volume 9, page 2098, published by Orbis. The dimensions quoted are estimated and based on the similar Su-20 'Fitter C'.

Colour Options

Three colour schemes are provided, a German aircraft which can be completed in East German or unified German markings, a Polish machine or a Soviet machine. All three options have a camouflage pattern of three colours on the upper surfaces i.e. dark green and two browns and light grey undersurfaces. The diagram used shaded lines to denote the various colours and I found them rather confusing, so I coloured each shade with a different pencil crayon which helped. I chose the Soviet aircraft and used Humbrol paints (119 and 186 for the two browns, 149 for the dark green and 127 for the light grey). For the dielectric panels I

used Revell 365 with a bit of Humbrol 149 to darken it slightly. After the painting was completed, I gave the model a coat of thinned Humbrol GlossCote to aid decal adhesion followed by a coat of Humbrol SatinCote after the decals had dried.

Decals

The decals were applied using Superscale Set and Sol solutions. The decals were slightly out of register, and this was most noticeable on the German and Polish National markings which dictated my choice of the Soviet aircraft. The decals were printed by Propagteam and although they were thin with little excess decal film, they took ages to lift off their backing paper. When I applied the decals to the model I found that they stuck like limpets and could not be moved into their correct position. I resorted to using Cutting Edge sheet CED72022 for the intake warning triangle, the six stars and the Sukhoi archer symbol. The rhino markings on the port fin, the guard's badge and the tiger banner on the starboard nose all came from the kit decal sheet and were applied successfully. Note that the aircraft shown in the boxtop painting is not the same as the one on the instruction sheet for which the decals are provided. The aircraft number 'Yellow 88' is depicted incorrectly on the decal sheet with each figure eight made up of two lozenge shapes. This particular aircraft is shown in a photograph in World Air Power Journal Volume 20 in an article on the Soviet Air Force in Germany. Also note that the rhino decal appears to be too large when compared to the photo and the aircraft does not have the chaff/flare dispensers fitted.

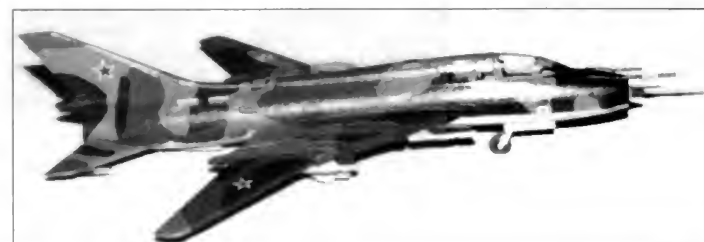
Decal Rating = 5/10

Conclusions and Recommendations

This is not an easy model to build, suffering from poor part location and mediocre decals, however, once completed, it looks good. Volume 2 of World Airpower Journal has a good article on the Fitter family which you may find useful. Recommended.

My thanks to Hannants for the review sample.

Graham Kinnear



Thank You

Scale Aviation Modeller International would like to thank REVELL, Binney & Smith (Europe) Ltd for the generous supply of paints and accessories from their extensive range for use by the review team throughout 1999.



Thank You

Scale Aviation Modeller International would like to thank AeroMaster (via Athena Books & Hannants) for the generous supply of paints from their 'Warbird Color' and 'Warbird Acrylic Color' range for use by the review team throughout 1999.



Thank You

Scale Aviation Modeller International would like to thank Humbrol Ltd for the generous supply of paints and accessories from their extensive range for use by the review team throughout 1999.



Thank You

Scale Aviation Modeller International would like to thank AstroModel for the generous supply of paints from their LifeColor range for use by the review team throughout 1999.

Gloster Meteor F Mk 1 & V-1

Technical Data	
Manufacturer: Tamiya	
Scale: 1/48th Price: £24.99	
Panel Lines: Recessed ✓	
Status: Revised and Combined Tooling ✓	
Type: Injection Moulded Plastic	
Parts: Plastic 81 (Grey), Clear 10	
Also Included: Nose Weight	
Decal Options:	
• 1. YQ-E, EE216, Flt. Lt. Dean, No. 616 Sqn	
• 2. YQ-D, EE219, No. 616 Squadron	
• 3. YQ-G, EE222/G, No. 616 Squadron	
Manufacturer: Tamiya Inc., 3-7 Onda-ura, Shizuka-City, Japan.	
UK Importer: Richard Kohnstam Ltd 13-15a High Street, Hemel Hempstead, Herts. HP1 3AD	
Tel: 01332 261721 Fax: 01442 240647	

Comments:

This kit features the fully revised Meteor F Mk 1 kit which has the air brakes removed and filled and the elongated bulges aft of the wheel wells. The Fi 103 was originally released

separately last year, but not surprisingly it has now been rebored with the Meteor to make this 'new' offering. No form of display stand is included in this box which seems odd when you consider that a pilot figure is in the Meteor and the V-1 could be suitably posed in front of the 'flying' Meatbox.

The decals for the V-1 are still being printed in the USA by Scale-Master, but the markings for the Meteor are now produced in Japan by Tamiya and seem to be up to the high standards we would expect from them.

Overall well worth adding to your collection, and a lot cheaper than buying both kits separately!



(Westland) SA341 Gazelle

Technical Data	
Manufacturer: Airfix	
Scale: 1/72nd Price: £2.99	
Panel Lines: Raised ✓ Status: Reissue ✓	
Type: Injection Moulded Plastic	
Parts: Plastic 34 (Grey), Clear 6	
Decal Options:	
• 1. XZ333, No. 670 Squadron, Army Air Corps, Middle Wallop, 1988	
• 2. ZB628, No. 2 Flying Training School, RAF Shawbury, 1988.	
Manufacturer: Airfix, Marfleet, Hull, North Humberside. HU9 5NE	
Tel: 01482 701191 Fax: 01482 712908	

Comments:

This is one of the later kit releases from Airfix, and as a result is not as simplistic as other recent reissues. The panel lines and rivet detail

are all raised and the cockpit interior is quite well detailed with two pilot figures (odd 'one arm out' pose though!). The mouldings are not looking too well, as this issue has flash and ejector tower marks on a number of the pieces, some of them unfortunately on the smaller parts. The decals in this issue at least offer two versions, although the panels for the AAC version are red instead of orange.

Overall this is still a neat little kit, but it will take a lot of work to make into a really good one.



North American P-51D/J.26 Mustang

Technical Data	
Manufacturer: Airfix	
Scale: 1/48th Price: £9.99	
Panel Lines: Recessed ✓ Status: Reissue ✓	
Type: Injection Moulded Plastic	
Parts: Plastic 61 (Grey), Clear 3	
Decal Options:	
• 1. Mustang IV, KH655, QV-P, No. 19 Squadron, RAF Peterhead, April 1945	
• 2. P-51D Mustang, NZ2413 of No. 1 (Aukland) Territorial Air Force Squadron, RNZAF, Whenuapai, 1955.	
• 3. J.26 Mustang, '16' of 1st Squadron, F16 Wing, Swedish Air Force, Uppsala, 1948	
Manufacturer: Airfix, Marfleet, Hull, North Humberside. HU9 5NE	
Tel: 01482 701191 Fax: 01482 712908	

Comments:

This kit is actually the old Otaki one which was originally released in the mid-1970s and it has since been issued under the Arii, AMT and Matchbox labels. No modifications have been made to this kit and although it includes

a good interior and even a Merlin engine, the overall quality and accuracy of this kit are doubtful. The subject, in this scale, has of course been surpassed, but at £9.99 it is still quite inexpensive. I am sure many modellers will add one of these to their collection, and will be happy with the end result. The inclusion of the Swedish markings is a nice touch and the decals also include full stencilling and even one for the instrument panel. The quality of these decals is good, although the national insignia for the Swedish option in our example was seriously out of register.

Overall a good kit, but better are available.



MiG-3 z.7-30mm underwing cannon

Technical Data	
Manufacturer: Encore	
Origin: Cap Croix Du Sud (France) & Italeri (Italy)	
Scale: 1/72nd Price: £TBA	
Panel Lines: Recessed ✓	
Status: Upgrade ✓	
Type: Injection Moulded Plastic & Resin	
Parts: Plastic 32 (Cream), Clear 2, Resin 14	
Decal Options:	
• 1. 'White 04', 7 IAP, Leningrad Front.	
• 2. 'White 54', 7 IAP, Fleet Czumomorsky, Late 1943.	
Manufacturer: Encore, c/o Squadron Products, 1115 Crowley Drive, Carrollton, Texas 75011-5010, USA.	
UK Importer: Pocketbond Ltd	

Comments:

Originally issued by Cap Croix Du Sud of France in 1979, this kit was later more readily available under the Italeri label. More recently the kit became available with a number of resin updates in the Encore range and this latest example is one such release. The kit itself remains unchanged, being moulded in a cream coloured plastic with recessed panel lines and only very basic detail. To overcome

this somewhat, Encore have included a new resin cockpit interior which has been produced by True Details (another Squadron product brand). The decals are also new and although not very inspiring from the subject point of view they are better than both original offerings. The instruction sheet is a bit odd, being very big and having a few strange captions. The spheres that look like a smiling PacMan in fact depict the use of a curved knife blade, while the snarling PacMan is a file! About the only other thing you could have done with in the kit is a replacement vac-formed canopy because the injected one is thick and will hide all the additional details you have just added in the cockpit.

To convert this machine to the z.7 two ventral gondolas with 30mm cannon have been supplied in resin. These are fine but I would suggest you remove the barrels and replace them with scale tubing.



Douglas SBD-5E Dauntless

Technical Data	
Manufacturer: Revell®	
Origin: Matchbox (England)	
Scale: 1/32nd Price: £14.95	
Panel Lines: Raised & Recessed ✓	
Status: Reissue ✓	
Type: Injection Moulded Plastic	
Parts: Plastic 91 (Grey), Clear 5	
Decal Options:	
• 1. '2' of VMSB-231, Südpazifik, 1944	
• 2. 'S-6' of Marine Scouting Squadron MSS-3, MC AS Bourne Field, St Thomas, Virgin Islands, 1944.	
• 3. '166' of Groupeement d'Aéronautique Navale, Escadrille 4 FB, Cognac, 1944.	
Manufacturer: Revell AG, Henschelstraße 20-30, D-32257 Bünde, Germany.	
Distributor: Revell® Binney & Smith (Europe) Ltd, Amphill Road, Bedford. MK42 9RS	
Tel: 01234 360201 Fax: 01234 342110	

Comments:

Originally issued in 1977 by Matchbox this kit has subsequently been issued in the USA under the AMT label and is now owned by Revell-Monogram who bought the entire Matchbox range a few years

ago. No revisions or improvements have been made by Revell-Monogram and the only change in this version is that the multi-colour sprues of the original Matchbox version have given way to the grey plastic seen here. All of the panel lines are raised, but access panels etc are recessed. The level of detail is not high and the whole kit is very much simplified. The outer wing panels fold, and the dive brakes can be posed open. Each of these areas are very 'toy like' and the scope for modellers to add extra detail to this kit is almost unlimited. The new decal sheet offers an attractive French Naval version as well as the more usual USN options and the decals themselves have been printed for Revell in Italy. The carrier film and image is very matt and our example was marred by the fact that a small area of it had stuck to the instruction booklet.



Focke Wulf Fw 190G-8 (A-8/R8)

Technical Data

Manufacturer: Revell®
Origin: Trimaster (Japan) & Dragon (Hong Kong)
Scale: 1/48th **Price:** £14.95
Panel Lines: Recessed ✓ **Status:** Reissue ✓
Type: Injection Moulded Plastic
Parts: Plastic 111 (Grey), Clear 4
Decal Options:
 • 1. 'Red 12', II/SG 10, Bad Aibling, May 1945.
 • 2. 'White 3', Staffelfkapitan of 10./JG 54 'Grunherz', Iernberg, Poland, Summer 1944.
Distributor: Revell® Binney & Smith (Europe) Ltd, Amphill Road, Bedford, MK42 9RS
Tel: 01234 360201 **Fax:** 01234 342110

Comments:

Originally issued in the old Trimaster range in 1988, in 1990 the toolings were acquired by Dragon. This version was never actually issued under either label, as it is a combination of existing Fw 190 components. The A-8/R8 option was released as MA-8 by Trimaster but what is in this box is a combination of a number of the parts from

the Fw 190 range, noticeably the upper decking and forward cowl without machine guns fitted and the sprue with the underwing cannon gondola (A-8). A lot of the parts supplied in this kit are not required, and I am sure many Luftwaffe fans will be pleased to add them to their spares box for future projects.

The decals are once again printed for Revell in Italy and are quite matt. Do note however that the G-8 often had only the wing root armament (MG 151/20) fitted and therefore modellers finding that the options included are fitted out in that manner, should replace the upper cowl (C13) with the other 'C13' included on the C sprue. Confused, you will be!



Fiat G.91R

Technical Data

Manufacturer: Airfix
Scale: 1/72nd **Price:** £3.99
Panel Lines: Raised ✓ **Status:** Reissue ✓
Type: Injection Moulded Plastic
Parts: Plastic 27 (Grey), Clear 1
Decal Options:
 • 1. 'Frece Tricolori' Aerobatic Team, 313° Gruppo, Italian Air Force, Rivoalto Air Base, 1979.
 • 2. BD+361, Waffenschule 50, Erding, West German Air Force, 1959.
Manufacturer: Airfix, Marfleet, Hull, North Humberside, HU9 5NE
Tel: 01482 701191 **Fax:** 01482 712908

Comments:

Oh my goodness, what is this! To say that this kit is old is an understatement and the simplicity and lack of detail is borne out by there being just 27 pieces. There is no cockpit interior except a seat and pilot figure, the wings are one-piece, the mainwheels are like

small buttons with no real detail and the canopy is a mile thick. As you can tell we are not over-impressed by the return of such an old kit, but to give Airfix their due they have included the Frece Tricolori decals which are very fitting for this version. The decals themselves look quite good, although each image is very matt and there is a lot of excess carrier film to remove.

To be truthful this kit is one we could not recommend to a serious model maker, but if you just want a model of the G.91R then this is as good as any others currently available. For everyone else, wait until the new Revell one comes along.



Northrop F-5A Freedom Fighter

Technical Data

Manufacturer: Airfix
Scale: 1/72nd **Price:** £2.99
Panel Lines: Raised ✓ **Status:** Reissue ✓
Type: Injection Moulded Plastic
Parts: Plastic 42 (Grey), Clear 2
Decal Options:
 • 1. 38383, FA-383, First Fighter Base, Mehrabad, Imperial Iranian Air force, 1965.
Manufacturer: Airfix, Marfleet, Hull, North Humberside, HU9 5NE
Tel: 01482 701191 **Fax:** 01482 712908

Comments:

Originally issued in the early 1970's this kit is another which has been 'demoted' to Series 00. The level of detail is very sparse, with only a pilot figure and seat for the cockpit interior. There are a number of sink marks caused by

locating pins etc and there are also a number of ejector towers and a little flash on some of the smaller parts. The decals are to the usual standard and once again only one option is offered.

Although this kit has been surpassed by newer examples, I can recall being given a collection of built Airfix kits when I was eight and amongst them was an F-5A. That's how it all started for me anyway!



de Havilland Tiger Moth

Technical Data

Manufacturer: Airfix
Scale: 1/72nd **Price:** £2.99
Panel Lines: Raised ✓
Status: Reissue ✓
Type: Injection Moulded Plastic
Parts: Plastic 26 (Grey)
Decal Options:
 • 1. K2567, RAF, 1935
Manufacturer: Airfix, Marfleet, Hull, North Humberside, HU9 5NE
Tel: 01482 701191 **Fax:** 01482 712908

Comments:

This kit was originally released way back in 1957 and has been reissued a great number of times since. I recall making this kit in the mid-1970's when it was injected in yellow plastic. The reason for this kit's 'reissue' is that it has moved down the series listing and is now in the 00 series. The last time this kit was out it was in Series 1 and at £3.99 for 26 parts it was seriously over-priced. At £2.99 it still seems expensive for what you get, but it is a good

starting point. Looking at the mouldings there are a mass of ejector tower marks and this would be acceptable were it not for the ones that mess up the fabric effect on the wings, which will prove extremely difficult to remove. The new decals in this kit are up to Airfix's standards, love them or loath them, but only one option is offered.

This is an old kit, and for the more experienced modeller the Aeroclub version is a much better option. The low(ish) price and good availability of this kit will entice a number of people to buy it and I must admit that I have fond recollections of making mine way back in the 70's (it was gloss Lemon Yellow overall if I recall!)



Focke Wulf Fw 190A-8

Technical Data

Manufacturer: Airfix
Scale: 1/48th **Price:** £9.99
Panel Lines: Recessed ✓
Status: Reissue ✓
Type: Injection Moulded Plastic
Parts: Plastic 50 (Grey), Clear 2
Decal Options:
 • 1. 'Red 19', flown by Uffz Ernst Schröder, II/JG 300, Germany, Spring 1944.
 • 2. 'Black 5', 8/JG54 'Grunherz', Germany, Autumn, 1944
Manufacturer: Airfix, Marfleet, Hull, North Humberside, HU9 5NE
Tel: 01482 701191 **Fax:** 01482 712908

Comments:

This is another ex-Otak kit that has since been reissued by Arii, AMT and Matchbox. The level of detail is quite good, and I am sure etched brass detail sets are available for this kit in its original form. The canopy does not include the rear (solid) decking separate, so this is best replaced with a

vac-formed example that comes as a single piece. A drop tank and wing-mounted twin MG gondolas are included, along with a crewman figure that looks like it came out of a child's toy set. Accuracy-wise this kit is not bad, but we all know that the original tooling was done from the example in France. At this time it was suspended from the roof with the undercarriage down, and this resulted in the undercarriage being 'unloaded' and this is how it is depicted in this kit. This does result in a model that looks like it is on tip-toes and most modellers will want to modify this area of the kit.

The decals are well printed with a matt finish and quite a lot of carrier film to remove. A full set of stencils is included and the instrument panel is also supplied as a decal. Once again though the printing quality is poor, with the Grunherz shield being totally out of register in our example.



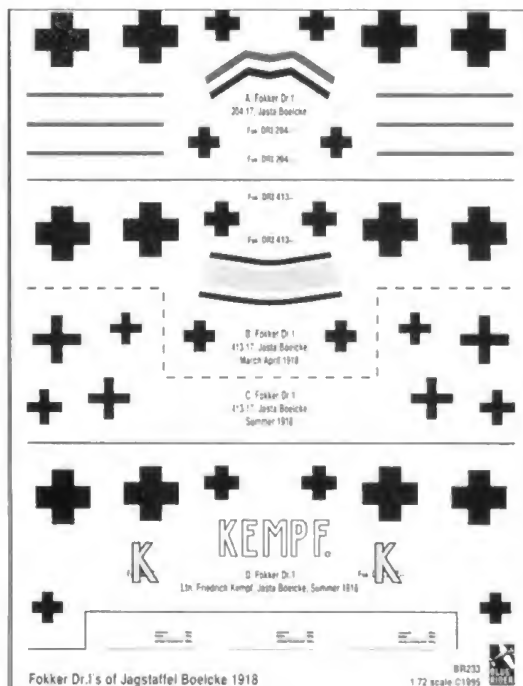
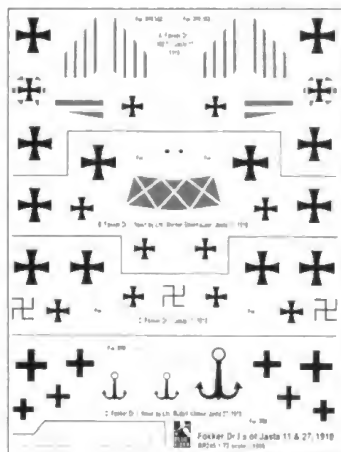
Blue Rider

A special edition set, along with a limited edition set and a new sheet have all been released by Blue Rider recently and we have received samples directly from them for review.

1/72nd Scale

BR-0414 Red Army of China 1945-46

- 1. Nakajima Ki-43-II Otsu Hayabusa, S/No. N/K of the Red Army of China Air Force, Communist Aviation School, Manchuria, 1945-6. This machine is Light Grey overall with irregular patches of green on the upper fuselage and flying surfaces. The upper decking is matt Dark Grey with the spinner red and white.
- 2. Mitsubishi Ki-46 Otsu, S/No. N/K of the Red Army of China A.E., No. 1 Squadron, Air Combat Group, 1945-6. This has an upper surface camouflage of Dark Green and Dark Brown with the demarcation areas between each colour in Pale Turquoise. The upper wing surface camouflage is unknown, but the undersurface is Light Grey.
- 3. Kawasaki Ki-45 KaIc, S/No. N/K of the Red Army of China Air Force, No. 1 Squadron, Air Combat Group, 1945-6. This



The three main decal sheets offered in BDP-004



The eleven options within BDP-004

machine's is Light Grey overall with irregular patches of Dark Green on the fuselage and flying surfaces. The spinners are Light Brown. The decal sheet includes all of the national and unique markings for each of the options offered.

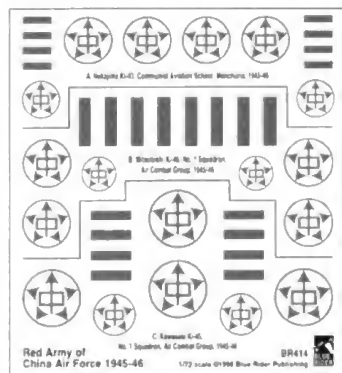
BDP-004 - The Fokker Dr.I Collection

This sheet is a special edition combining the following options from BR233, BR237 and BR245

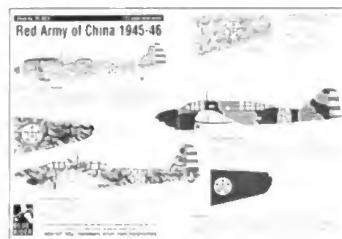
- 1. No. 204/17 of Jasta 2 (Boelcke), flown by Lt. Paul Baumer. This machine is Dark Olive streaked dope on all upper surfaces and Turquoise underneath. The rear fuselage is white on the left and black on the right. The front cowling is black and the tailplane is black and white.
- 2. No. 413/17 of Jasta 2 (Boelcke), flown by Lt. Carl Bolle. This machine is in the same scheme as the previous option.
- 3. No. 413/17 of Jasta 2 (Boelcke), flown by Lt. Carl Bolle. Once again this machine is in a similar overall scheme as the previous two options.
- 4. No. N/K of Jasta 2 (Boelcke), flown by Lt. Friedrich Kempf. This well-known machine is Dark Olive streaky dope overall with the underneath in Turquoise. The rear fuselage is white on the right and black on the left with the front cowling also in black. The 'Kennst mich?' and 'Kempf' legends are

carried on the wings.

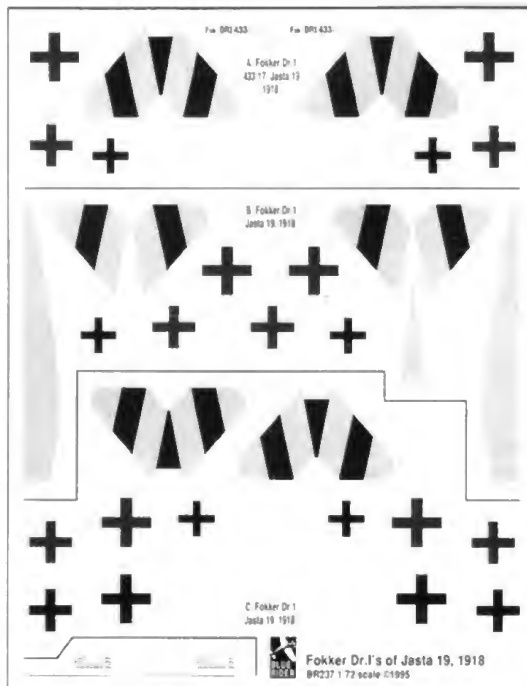
- 5. No. 502/17 of Jasta 11 flown by an unknown pilot. This machine is in the same overall scheme as the previous option, although the rear fuselage and tail are white



The decal sheet from BR-0414



The three options offered on BR-0414



with red stripes. The cowling and wheel hubs are also red.

- 6. No. N/K of Jasta 11 flown by Lt. Werner Steinhauser. This machine is in the same scheme as the previous options, with the rudder in white, the engine cowling red and the wheel hubs black.
- 7. N/K of Jasta 11 flown by an unknown pilot. This aircraft is in the streaky Dark Olive over Turquoise scheme but the entire rear fuselage, tailplanes and rudder are also in Turquoise. The cowling is red and the wheel centres are black.
- 8. N/K of Jasta 27, flown by Lt. Rudolf Klimke. Once again streaky Dark Olive over Turquoise with the tailplanes, engine cowling and wheel centres in yellow.
- 9. No. 433/17 of Jasta 19, flown by Lt. Arthur Rahn. Once again the streaky Dark Olive over Turquoise scheme is present, although this machine has a white rudder and the tailplanes in yellow and black. The engine cowling is white.
- 10. N/K of Jasta 19, flown by an unknown pilot. Another streaky Dark Olive and Turquoise machine, this one does have the entire fuselage white, with yellow side panels and the tailplanes in yellow and black stripes.
- 11. N/K of Jasta 19, flown by an unknown pilot. The final streaky Dark Olive and Turquoise option, this machine has the upper wing and struts in white, along with a white rudder and engine cowling and yellow and black tailplanes.

This set contains three complete decal sheets plus an amendment sheet which changes the fuselage markings and cowling eyes of Steinhauser's machine to red and yellow instead of red and white. All the national and unique markings for each option are included, along with the yellow and black striped tailplanes for a number of options.

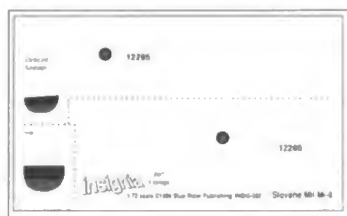
BDP-005 - Slovene Air Force 1991-1995

This sheet is once again a combination of previous sheets (BR801 and BR809), but is limited to just 140 copies, all of which are numbered.

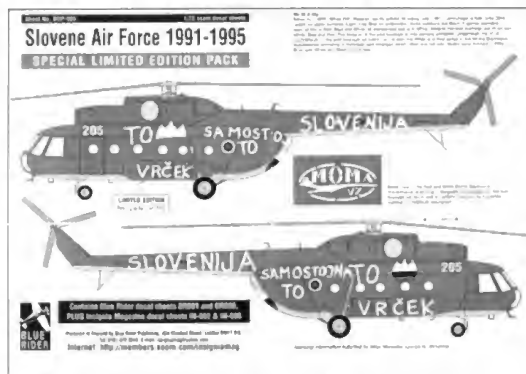
- 1. Soko SA342 Gazelle, SL-HAA (ex-Federal Yugoslav Air Force S/No. 028).

This machine is Light Blue Grey over White with a black and white cheatlines between them.

- 2. Bell 412, SL-HAB. This machine is white overall with a series of black and light grey lines on the tail boom and a black cheatline down each fuselage side.
- 3. Bell 412SP, SL-HAD, retaining its military scheme of Light Khaki overall.
- 4. Agusta 109, SL-HDC. This machine is in a similar scheme to option 1, although the cheatline is dark blue.
- 5. Pilatus PC-9, S5-DPI, 'Piran' of the 15th Aviation Brigade, Slovenian Territorial Defence Forces, Portoroz, 1995. In white over orange-red with a black anti-dazzle panel forward of the cockpit.
- 6. Bell 206B-3 Jet Ranger, S5-HKM, 'Kralj Matjaz' of the 15th Aviation Brigade, Slovenian Territorial Defence Force, Brnik,

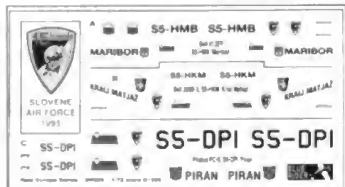


The five decal sheets offered in BDP-005



October 1995. This machine is Dark Green and Chocolate Brown overall.

- 7. Bell 412EP, S5-HMB, 'Maribor' of the 15th Aviation Brigade, Slovenian Territorial Defence Force, Portoroz, 1995. This machine is Dark Green, Mid Green and Chocolate Brown camouflage overall.
- 8. Mil Mi-8 Hip, S/No. 12205, 'White 205', Rakicani sports airfield, Slovenia, July 1991. This machine is in a faded Grey Olive Green over Light Blue-Grey scheme and has had a mass of slogans painted onto it.
- 9. Soko SA341 Gazelle, 12660, 'White 660' of the Yugoslav Air Force. This machine is



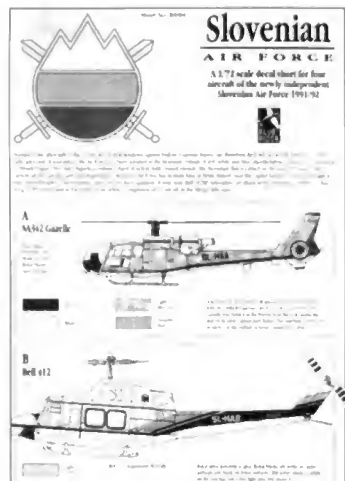
Olive Green overall.

- 10. Soko SA341 Gazelle, 'TO-001'. This machine was the first operated by the Slovenian A.F. and is a captured JRV machine. It retains the standard JRV Olive Green scheme, but the Yugoslavian national markings have been painted out in a Greyish Olive Green and Sloven markings applied over the top.
- 11. Soko SA341 Gazelle, 'TO-001', in the same machine as previously offered, but shown as it was by the 9th July 1991, with the red elements of the Slovenian markings applied.

Once again the five decal sheets included in this set offer all the unique and national insignia for each option.

This is another good selection of subjects from Blue Rider and the sheets reviewed here retail for £3.00 (BR-414), £8.50 (BDP-004) and £5.00 (BDP-005) respectively.

Our thanks to Blue Rider for the review samples.



Six of the options offered in BDP-005



Copper State Models

Two new sheets from this manufacturer have been passed directly to us for review.

1/28th Scale

CSM #124 - Spad 13.C1

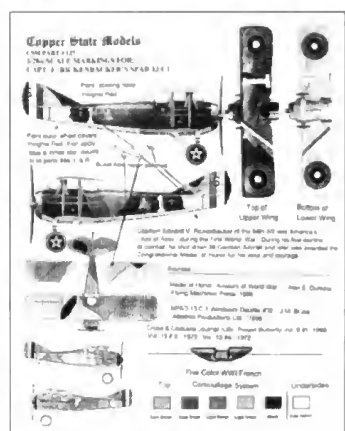
This sheet offers markings for the Spad 13.C1 flown by Lt. Frank Luke Jr. of the 27th AS. The machine is painted in the five-colour French scheme of Dark Brown, Dark Green, Light Brown, Light Green and Black, with the undersurface in Pale Yellow. The decal sheet includes all the national and unique markings for this subject, down to the wheel centres and the upper and lower wing black & white checks.

CSM #127 - Spad 13.C1

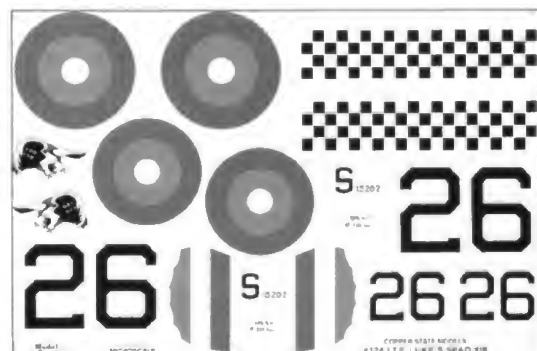
This sheet also offers markings for a Spad 13.C1, although this time the chosen subject is that of Capt. Edward V. Rickenbaker of the 94th AS. This top-scoring American ace of WWI finished with 26 kills and the Spad depicted here is in the same five-colour scheme noted on the earlier sheet. All national markings are once again supplied along with the unique markings for Rickenbaker's machine. These include the wheel centres, 'hat in a ring' motif and even the five little German cross patches that were applied over bullet holes.



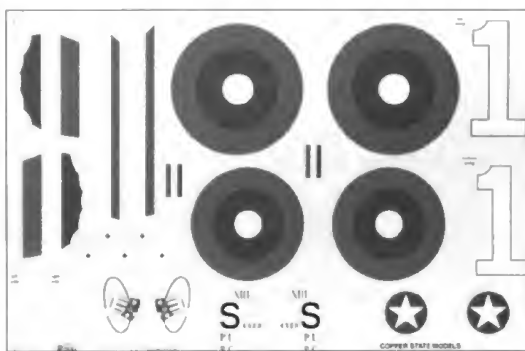
The single option on CSM #124



The single option on CSM #127



The decal sheet from CSM #124



The decal sheet from CSM #127

Each of these sheets has been printed by Microscale, so their quality is assured and I am sure that the subject matter will be of interest to all WWI fans.

Our thanks to Copper State Models for the review samples.

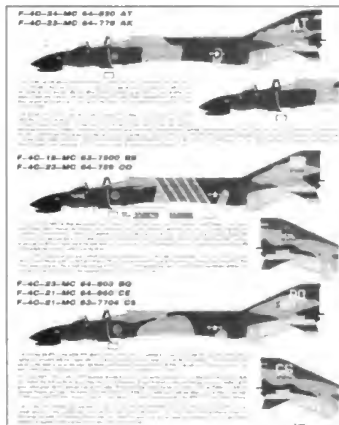


Fox One Decals

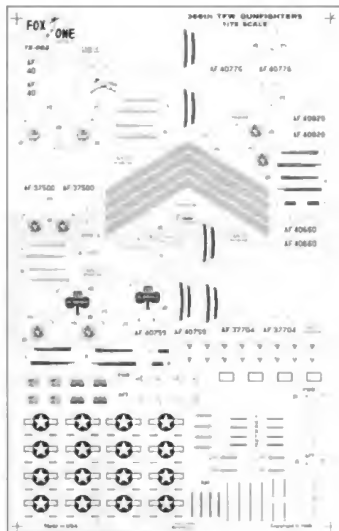
The most recent releases from this manufacturer have been passed to us for review by Hannants.

1/72nd Scale

72-002 366th TFW Gunfighters



Three of the options from 72-002



The decal sheet in 72-002

- 1. F-4C-24-MC, 64-820, 'AT' flown by Lt. Col. Rober F. Titus the Commander of the 389th TFS. This machine is Tan (FS30219), Medium Green (FS34102) and Dark Green (FS34079) over Light Grey (FS36622).
- 2. F-4C-24-MC, 64-776, 'AK' flown by Maj. Robert D. Anderson & Capt. Fred D. Kjer when, on the 23rd April 1967, they shot down a MiG-21 with an AIM-7 over Hanoi. This is in the same scheme as the previous option.
- 3. F-4C-18-MC, 63-7500, 'BB', 'The Blue Max' flown by Col. Frederick 'Boots' Blesse. Again in the same scheme as option 1, although it carries light blue bands around the mid-fuselage.
- 4. F-4C-23-MC, 64-759, 'CO' flown by Col. Bobo Maloy the commander of the 366th TFW in October 1967. Once again it is in the standard SEA scheme seen on the other options.
- 5. F-4C-23-MC, 64-803, 'BQ' of the 390th TFW with Roadrunner artwork on the nose.
- 6. F-4C-21-MC, 64-660, 'CE', 'Speedo 01' flown by Maj. James Hargrove & 1st Lt.

Stephen DeMuth of the 480th TFS. This machine scored the first air-to-air victory for the F-4 and is in the same scheme as the previous options.

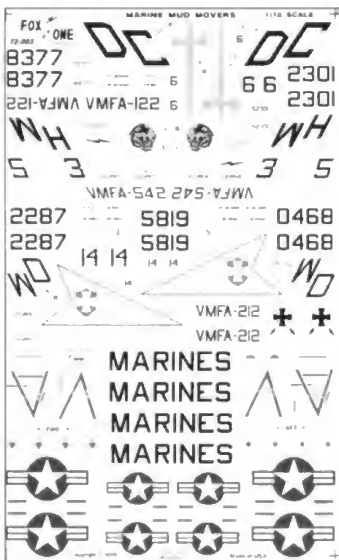
- 7. F-4C-MC, 63-7704, 'CS' flown by Capt. Jim Craig and 1st Lt. Jim Talley of the 480th TFS. Once again the overall SEA scheme is carried.

Each of the options on this sheet carries the 'gunfighters' motif on the intake trunks. The decal sheet includes all the unique markings for each option along with four complete sets of stencils.

72-003 Marine Mud Movers



Three of the options from 72-003



The decal sheet in 72-003

- 1. F-4B, BuNo. 148377, 'DC6' flown by Capt. Jack McEncroe and 1st Lt. Steve Lear of VMFA-122
- 2. F-4B, BuNo. 152301, (also) 'DC6' of VMFA-122 when it was at MCAS El Toro in mid-1967.
- 3. F-4B, BuNo. 152287, 'WH3' flown by Capt. Manny Simpson and Capt. Sandy Clark of VMFA-542
- 4. F-4B, BuNo. 152039, 'WHS' flown by Capt. Jack Albright and 1st Lt. Bob Anderson of VMFA-542.
- 5. F-4J, 'WD14' flown by Capt. Benjamin Tebault and 1st Lt. Mike Konow of VMFA-212.

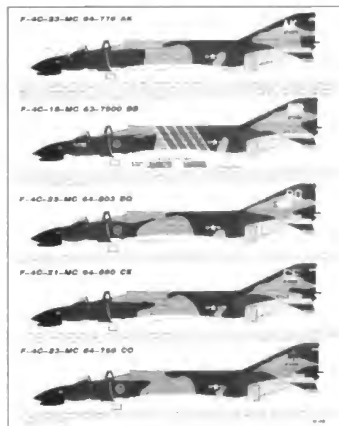
Each of these options is Matt Gull Grey (FS36440) over Gloss White (FS17875) with the nose cone, flaps and tailerons also

in white.

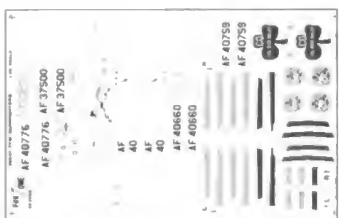
Once again the decal sheet includes all the unique and national markings for each option, as well as two complete sets of stencils.

Each of the 1/72nd scale sheets retail for £5.50.

1/32nd Scale



The five options on 32-002



The main decal sheet from 32-002

32-002 366th TFW Gunfighters

- 1. F-4C-24-MC, 64-776, 'AK' flown by Maj. Robert D. Anderson & Capt. Fred D. Kjer when, on the 23rd April 1967, they shot down a MiG-21 with an AIM-7 over Hanoi. This machine is Tan (FS30219), Medium Green (FS34102) and Dark Green (FS34079) over Light Grey (FS36622).
- 2. F-4C-18-MC, 63-7500, 'BB', 'The Blue Max' flown by Col. Frederick 'Boots' Blesse. This machine is in the same scheme as option 1, although it carries light blue bands around the mid-fuselage.
- 3. F-4C-23-MC, 64-803, 'BQ' of the 390th TFS. This machine carries a roadrunner cartoon on the nose and is in the standard SEA colour scheme.
- 4. F-4C-21-MC, 64-660, 'CE', 'Speedo 01' flown by Maj. James Hargrove & 1st Lt. Stephen DeMuth of the 480th TFS. This machine scored the first air-to-air victory for the F-4 and is in the same scheme as the previous options.
- 5. F-4C-23-MC, 64-759, 'CO' flown by Col. Bobo Maloy the commander of the 366th TFW in October 1967. Once again it is in the standard SEA scheme seen on the other options.

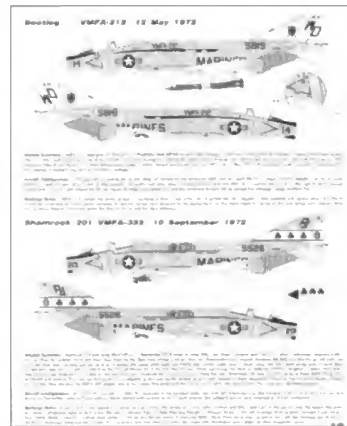
All of the options on this sheet carry the 'gunfighters' motif on the intake trunks. The decal sheets include two complete sets of national markings and stencils, as well as all the unique markings for each option.

32-003 USMC F-4J Phantoms in SE Asia

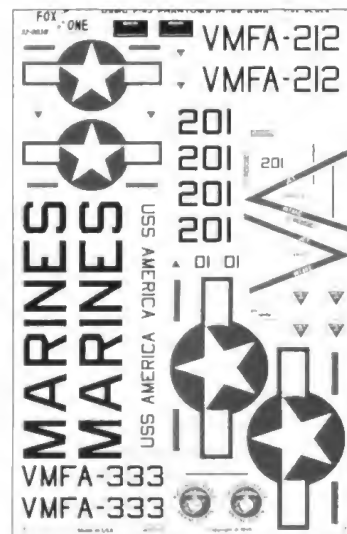
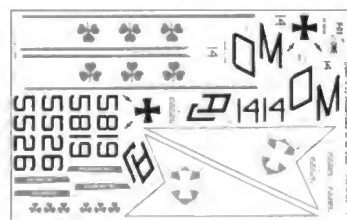
- 1. F-4J, 'WD14' flown by Capt. Benjamin Tebault and 1st Lt. Mike Konow of VMFA-212.
- 2. F-4J, 'AJ201' flown by Maj. Lee 'Bear'

Lasseter and Capt. 'Li'l John' Cummings of VMFA-333 when they shot down a MiG-21 over Phuc Yen airfield on the 10th September 1972.

Each of these options is Matt Gull Grey (FS36440) over Gloss White (FS17875) with the nose cone, flaps and tailerons also in white.



The two options on 32-003



The two decal sheets from 32-003

Once again the decal sheets include all the unique and national markings for each option, as well as two complete sets of stencils.

Sheet 32-002 retails for £8.75, while 32-003 is £9.95.

Overall quality is assured, as these sheets are printed for Fox One by Microscale and the comprehensive instructions and colour notes will leave modellers in no doubt about the colour schemes and ordnance carried by each of the options offered on these sheets.

Our thanks to Hannants for the review samples.

Information

Worldwide Enquiries:

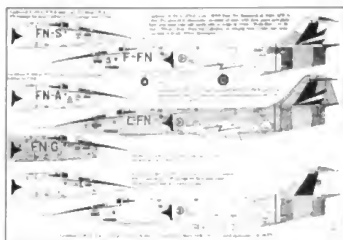
Fox One Decals, PO Box 12111, Wichita, KS 67277-2111, USA.

RHS Dekaler

This is a new range of decals that has recently been passed to use for review and all of them deal with Norwegian subjects.

1/72nd Scale

1A - Starfighter



The seven options on 1A-Starfighter



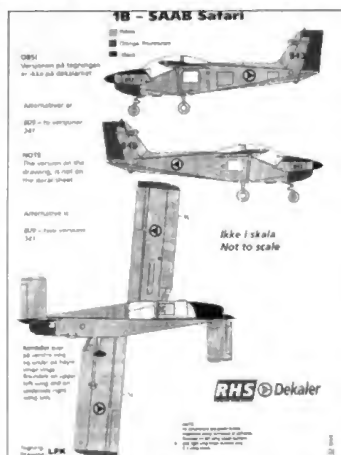
The decal sheet from 1A-Starfighter

- 1. F-104G, FN-S, S/No. 12234 of No. 331 Squadron based at Bodo AFB in 1964. This machine is bare aluminium overall with dark green anti-dazzle panel, light grey nose cone and white upper surfaces to the wings.
- 2. F-104G, FN-N, S/No. 12630 of No. 331 Squadron based at Bodo AFB in 1964. This machine is in the same scheme as the previous option.
- 3. F-104G, FN-A, S/No. 12237 of No. 331 Squadron based at Bodo AFB in 1964. This machine is in the same scheme as option 1.
- 4. F-104G-CA (Canadair assembled), FN-L, S/No. 17757 of No. 334 Squadron based at Bodo AFB in 1967. This aircraft is light grey overall.
- 5. F-104G-CA (Canadair assembled), FN-G, S/No. 17758 of No. 334 Squadron based at Bodo AFB in 1967. This machine is in the same scheme as the previous option.
- 6. F-104G, '223', S/No. 17758 (previously FN-P) of No. 331 Squadron based at Bodo AFB in 1975. This machine is in the same scheme as option 2.
- 7. F-104G, '233', S/No. 12239 (previously FN-W) of No. 331 Squadron based at Bodo AFB in 1975. Again in the same scheme as option 2.

The decal sheet itself does not contain all the markings required to make all of the options listed above, but at least one complete machine can be achieved. The decals themselves are printed by DMC, and if you are into car modelling, you will be aware of their range. If not, take it from us, they are very good quality!

1B - SAAB Safari

- 1. SAAB Safari, '809'. This machine is yellow overall with a black anti-dazzle panel and Fluorescent Orange rudder, wing tips and lower engine cowlings.
- 2. SAAB Safari, '809'. This machine is in the same scheme as the previous option, but the style of the '809' is different.
- 3. SAAB Safari, '341'. This machine is in the same scheme as the previous two options



The overall scheme for all three options on 1B-SAAB Safari



The decal sheet from 1B-SAAB Safari

2A - Starfighter

- 1. F-104G-CA (Canadair assembled), S/No. 12757, '757' of No. 331 Squadron, Bodo AFB in 1974. This machine is light grey overall with a dark green anti-dazzle panel.
- 2. CF-104, S/No. 12717, '717' of No. 334 Squadron, Bodo AFB in 1974. This machine is Olive Drab over silver/grey with a black anti-dazzle panel.
- 3. CF-104, S/No. 12759, '759' of No. 334 Squadron, Bodo AFB in 1975. This machine is in the same scheme as the previous option.

2C - Arapaho

This sheet offers serial numbers for the following machines: 139, 142, 145, 147, 148 & 149.

All these options are Field Black and Olive Green over Grey.

3A - Harvard

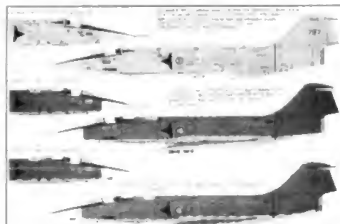
- 1. FT-252, M-AV.
- 2. FS-911, M-AM
- 3. 88-1545, M-BG
- 4. 7335, M-BO

All these machines are blue overall (Humbrol 198 Lufthansa Blue) with the lower wings in yellow (Humbrol 24 Trainer Yellow).

3B - Spitfire PR Mk XI

- 1. PL1979 A-ZB
- 2. A-ZA
- 3. A-ZC

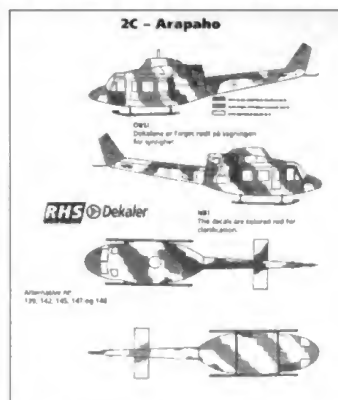
All these machines are PRU Blue overall.



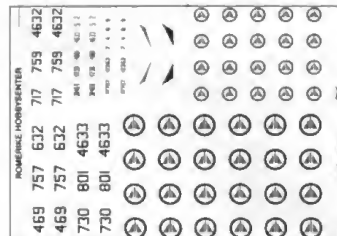
The three options on 2A-Starfighter



The decal sheet from 2A-Starfighter



The overall scheme for all the options on 2C-Arapaho



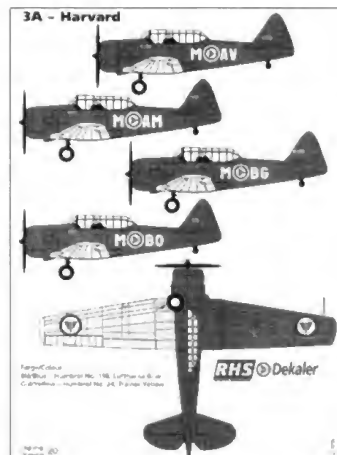
The decal sheet from 2C-Arapaho

3C - He 115

- 1. He 115 '60'
- 2. He 115 '58'

Each of these options is light grey (Humbrol 64) overall. The decal sheet only includes the inner white-outlined blue bands and the red elements will have to be applied using Humbrol 60 (Flat Red).

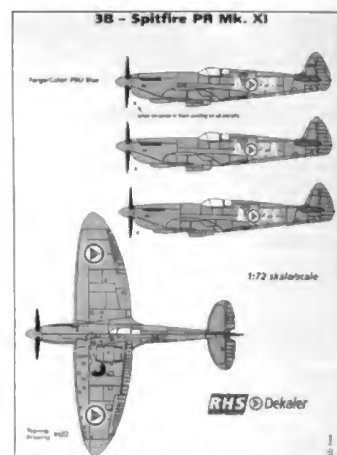
Each of these sheets is very good. The instructions are a bit sparse and on most there is no historical detail at all. That said, colour matches are included, so the options are within the scope of most modellers. The subject matter is unique and for that reason alone I would suspect that there will be a few



The four options on the colour instructions for 3A-Harvard



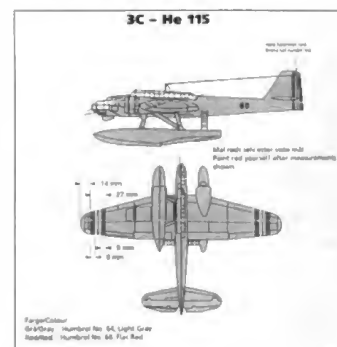
The decal sheet for 3A-Harvard



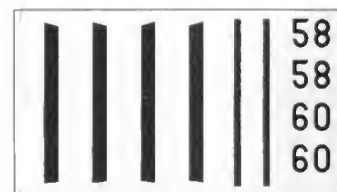
The three options on the colour instructions for 3B-Spitfire PR Mk IX



The decal sheet for 3B-Spitfire PR Mk IX



The two options on 3C-He 115



The decal sheet from 3C-He 115

modellers happy to see them. I wonder if they do Mosquito markings in 1/48th scale?

We have no UK source of these sheets as yet, so the prices listed are in NOK (Norwegian currency):

- 1A 75NOK
- 1B 39NOK
- 2C 48NOK
- 2A 75NOK
- 3A 65NOK
- 3B 65NOK
- 3C 48NOK

Our thanks to Romerike Hobbysenter for the review samples.

Information

Worldwide Enquiries:

Romerike Hobbysenter,
PO Box 102, N-2010 Stømmen, Norway.

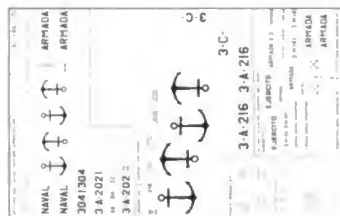
CALC•AS

This is a relatively new range from Argentina and examples have been passed directly to us for review.

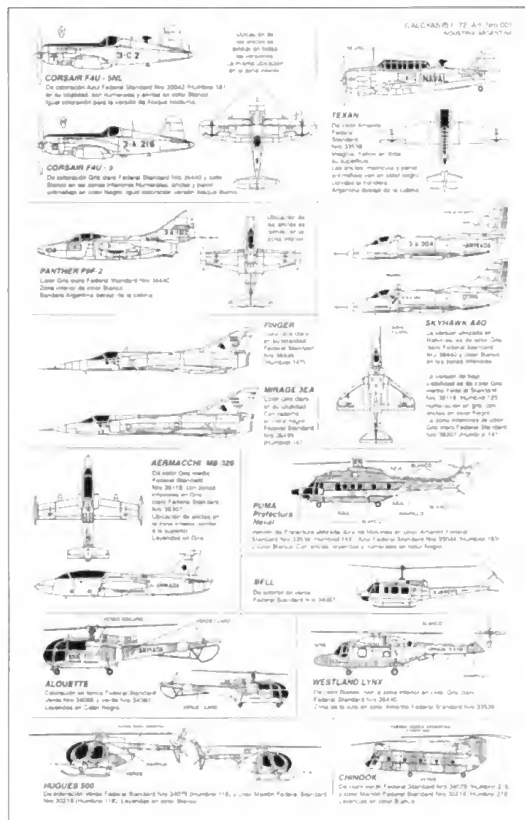
1/72nd Scale

CALC•AS 001

- 1. Vought Chance Corsair F4U-5NL, 3-C-2 of the Argentinian Navy. This machine is Glossy Sea Blue overall.
- 2. Vought Chance Corsair F4U-5, 3-A-216 of the Argentinian Navy. This aircraft is Light Gull Grey overall.
- 3. Grumman F9F-2 Panther, 3-A-102 of the Argentinian Navy. This machine is Light Gull Grey overall.
- 4. IAI Kfir. This machine is Light Grey (FS 36495) overall.
- 5. Dassault Mirage IIIIEA. This is Light Grey (36495) overall.
- 6. Aermacchi MB 326. This machine is Dark Sea Grey (FS 36118) and Grey/Green (FS 36307).
- 7. Alouette, 3-H-111. This machine is camouflaged in Green (FS 34086) and Light Green (FS 34087).
- 8. Hughes 500. This is Dark Green (FS 34079) and Tan (FS 30219) overall.
- 9. N.A. Texan, 2-G-104. This machine is Insignia Yellow (FS 33538) overall.
- 10. Douglas Skyhawk, 3-A-304. This machine is Light Gull Grey (FS 36440) overall.
- 11. Douglas Skyhawk, 3-A-302. This machine is Dark Grey (FS 36118) overall.
- 12. Puma of the Argentine Navy. This machine is Insignia Blue (FS 35044) overall with white and yellow cheatlines.
- 13. Bell UH-1N. This machine is Light Green (FS 34087) overall.
- 14. Westland Lynx, 3-H-141. This machine



The main decal sheet in CALC•AS 001



All of the options on CALC•AS 001

is white over Light Gull Grey (FS 36440) with a band around the tail boom in ID Yellow.

- 15. Boeing-Vertol Chinook. This machine is Light Green (FS 34079) and Tan (30219) overall.

The decal sheet includes all the unique markings for each option, along with a good selection of national insignia.

1/48th Scale

CALC•AS 002

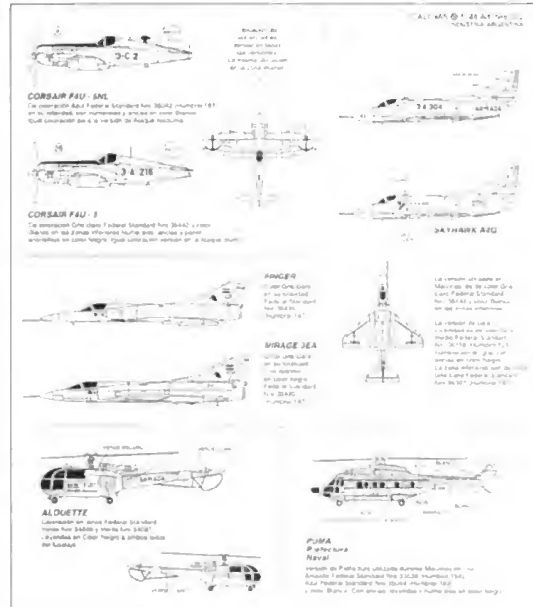
- 1. Vought Chance Corsair F4U-5NL, 3-C-2 of the Argentinian Navy. This machine is Glossy Sea Blue overall.
- 2. Vought Chance Corsair F4U-5, 3-A-216 of the Argentinian Navy. This machine is Light Gull Grey overall.
- 3. IAI Kfir. This machine is Light Grey (FS

36495) overall.

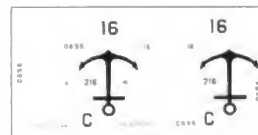
- 4. Dassault Mirage IIIIEA. This machine is Light Grey (36495) overall.
- 5. Alouette, 3-H-111. This machine is camouflaged in Green (FS 34086) and Light Green (FS 34087).
- 6. Douglas Skyhawk, 3-A-304. This is Light Gull Grey (FS 36440) overall.
- 7. Douglas Skyhawk, 3-A-302. This is Dark Grey (FS 36118) overall.
- 8. Puma of the Argentine Navy, in Insignia Blue (FS 35044) overall with white and yellow cheatlines.

Once again the decals offer all the unique markings for each option along with a number of national insignia. Due to the bigger scale involved, there are one and a half sheets in this set.

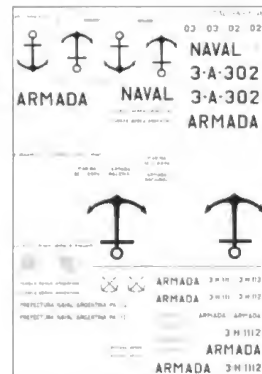
As to yet there is no UK source for these



All of the options on CALC•AS 002



The two decal sheets in CALC•AS 002



decals. The quality of each image, although not up to the standards of other major manufacturers, is still very good and the subjects being offered make them unique and therefore very attractive.

Our thanks to CALC•AS for the review samples.

Information

Worldwide Enquiries:
CALC•AS, S. Novais, Malharro 324 Bo.
Patagonia, Bahia Blancs CP. 8000, Republic of Argentina.

ADS Decals

The most recent sheet from this manufacturer has been passed directly to us for review.

1/72nd Scale

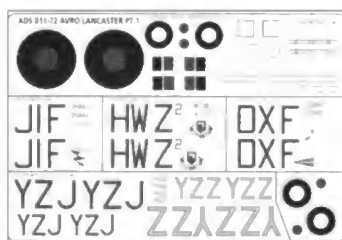
ADS 011-72 Avro Lancaster Pt.1

- 1. B Mk III, LM739, HW•Z2, 'Grog's the Shot', No. 100 Squadron, April 1945. This machine led the attack on the Berchtesgaden (Eagle's Nest) and is in the standard Dark Green and Dark Earth over black scheme.
- 2. B Mk II, DS842, JI•F, 'Fanny Firkin' of No. 514 Squadron in May 1944, in the same scheme as the previous option.
- 3. B Mk III, ED989, DX•F, 'Frederick III' of No. 57 Squadron in May 1943. This machine was lost during a raid on

Peenemunde in August 1943 and is in the same overall scheme as the previous option.

- 4. B Mk I (Special), PD119, YZ•J of No. 617 Squadron in 1945. This aircraft carries a 22,000lb Grand Slam and is in a Dark Earth and Dark Green over Medium Sea Grey scheme with the port fin in black (a replacement?).

- 5. B Mk I (Special), PD121, YZ•Z of No. 617 Squadron in July 1946. This machine



The decal sheet from ADS 011-72



Two of the options on ADS 011-72

was Light Green and Light Earth over Ocean Grey with red-outlined yellow codes on the fuselage and under the tail.

The decal sheet (and a 1/4!) offer all the markings for each option along with two sets of national markings and one set of stencils. The instructions are much improved over previous releases from ADS, and they still include the high levels of information on each subject offered. The UK price for this sheet is £4.95, and examples can be obtained directly from ADS and a number of selected outlets.

Our thanks to ADS Decals for the review samples.

Information

Worldwide Enquiries:
ADS Decals,
PO Box 1768, Bristol. BS17 5FS
Tel/Fax: 01454 850119

Leading Edge Models

The latest releases from this manufacturer have been passed directly to us for review.

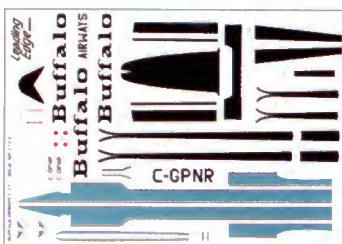
Buffalo Airways C-47.

This sheet offers markings for a C-47, C-GPNR, operated by Buffalo Airways. This had originally been KG602 with the RCAF and was purchased by Buffalo Airways in 1980. The decals depict this aircraft during its overhaul in 1999. It has the upper decking in white and the lower fuselage and upper wing in natural metal. The lower surfaces of the wings are Speed Grey. The fuselage cheatline, vertical tail, tailplanes and wingtips are in green. The colour mixes for each of the colours are listed on the colour instruction sheet.

This option can be obtained in three scales: #144.4 (1/144th), #72.9 (1/72nd) and #48.9 (1/48th).



The decal sheet from #72.14



The decal sheet from #72.9

CAF VU33 T-33 Special

As the instructions state, this sheet offers the markings that were applied to a T-33 of VU33. The special markings comprised an overall Dark Blue scheme with white wavy lines around the wings, vertical fin and tailplanes. A lightning bolt is applied down each fuselage side and a large ring and anchor on the lower centre section. The wavy lines and large motif are included on the

decal sheets in both scales.

This option can be obtained in two scales:

#72.14 (1/72nd)
#48.14 (1/48th)

Each of these sheets is up to the high standards we expect from Leading Edge and the release of another colourful T-33 is a welcome one. The C-47 is also interesting and I am glad to see this offered in all three 'main' scales. As yet we do not have a

confirmed UK price for either of the above sheet, but the entire Leading Edge range can be obtained from Hannants.

Our thanks to Leading Edge for the review samples.

Information

Worldwide Enquiries:

Leading Edge Models,
Bay E, 83 Skyline Crescent,
N.E., Calgary, Alberta, T2K 5X2, Canada.
Tel/Fax: 403 3274 7874



The colour instructions from the Buffalo Airways C-47 sheet



The colour instructions from the VU33 Special T-33 scheme

RAFDEC

This is a new UK decal range and the first two releases from them have been passed directly to us for review.

1/72nd Scale

RF7201 - Gloster Meteor

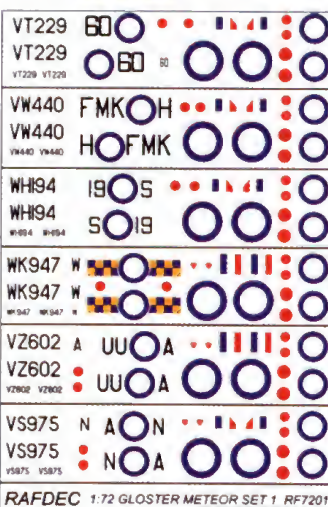
- 1. F Mk 4, VT229, '60', No. 12 FTS, RAF Weston Zoyland, 1954. This is aluminium overall with Trainer Yellow nose, fuselage and tail bands, intake rims, fin bullet and nosewheel door.
- 2. T Mk 7, VW440, FMK-H, No. 203 AFS, RAF Driffield, 1949 in aluminium overall.
- 3. T Mk 7, WH194, 19-S, No. 207 AFS, RAF Full Sutton, 1953. This machine is aluminium overall with Trainer Yellow bands around the wings only.
- 4. F Mk 8, WK947, 'W', No. 245 Squadron, RAF Stradishall, 1957. This is Dark Sea Grey and Dark Green (with a white fin) over aluminium.
- 5. FR Mk 9, VZ602, UU-A, No. 226 OCU, RAF Stradishall, 1951. This machine is aluminium overall.
- 6. PR Mk 10, VS975, A-N, No. 541 Squadron, RAF Buckeburg, 1953, in

Medium Sea Grey over PRU Blue.

RF7202 - Gloster Meteor

- 1. F Mk 4, RA482, HX-W, No. 226 OCU, RAF Stradishall, 1950. This machine is aluminium overall.
- 2. T Mk 7, WH228, '46', No. 209 AFS, RAF Weston Zoyland, 1950. This is aluminium overall with Trainer Yellow bands on the wings and fuselage.
- 3. T Mk 7, WG946, 72-Y, No. 206 AFS, RAF Oakington, 1953. This machine is in the same scheme as the previous option.
- 4. T Mk 7, WF881, 55-X, No. 203 AFS, RAF Driffield, 1953. This machine is in the same scheme as option 2.
- 5. T Mk 7, WA733, No. 85 Squadron, RAF Church Fenton, 1958. This aircraft is aluminium overall.
- 6. F Mk 8, WH401, L-M, Station Flight, RAF Linton-on-Ouse, 1953. This machine is aluminium overall with the tail unit in Insignia Red.
- 7. PR Mk 10, WB156, A-B, No. 541 Squadron, RAF Buckeburg, 1954, in Dark Sea Grey and Dark Green over PRU Blue.

Each sheet includes all the markings to make each option, but there is no stencilling. Each has been printed by the

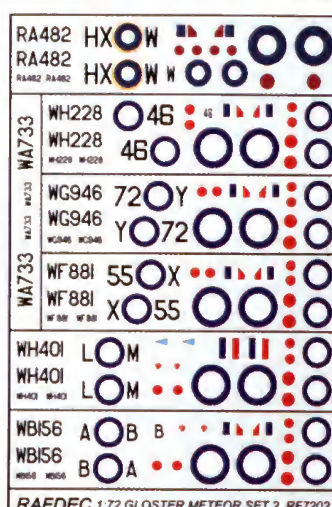


RAFDEC 1:72 GLOSTER METEOR SET 1 RF7201

Fantasy Printshop, so its quality is assured.

The above sheets retail for £4.95 plus 50p P&P and all payments should be by cheque made payable to 'RAFDEC' and sent to the address below.

Our thanks to RAFDEC for the review samples.



RAFDEC 1:72 GLOSTER METEOR SET 2 RF7202

RF7202 - Gloster Meteor

Information

Worldwide Enquiries:

RAFDEC,
183 Queens Road, Carterton,
Oxon. OX18 3XG
Tel: 01993 213141

AeroMaster Products

The most recent selection of sheets from this manufacturer have been passed directly to us for review.

1/72nd Scale

72-164 US 45 Degree ID Numbers & Letters (Black)

As the title states, this sheet offers a mass of 45° letters and numbers in black. Both standard ('solid') and stencil styles are included.

72-165 US 45 Degree ID Numbers & Letters (White)

Once again this sheet offers a mass of 45° characters, but this time in white.



72-164 US 45 Degree ID Numbers & Letters - Black



72-165 US 45 Degree ID Numbers & Letters - White

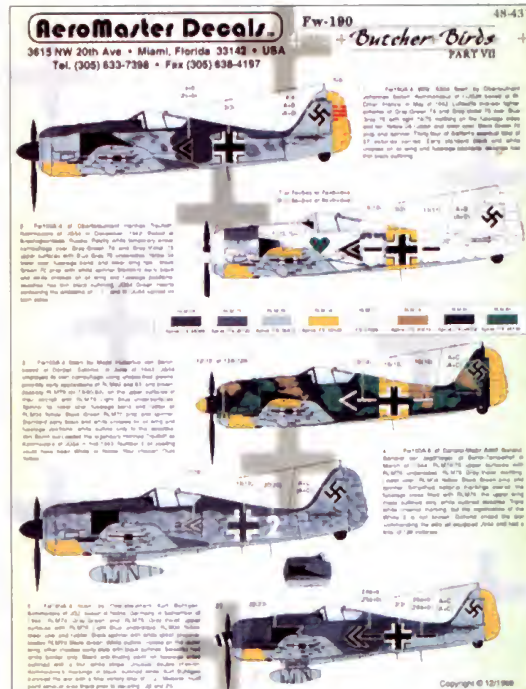


72-166 US 45 Degree ID Numbers & Letters - Red

72-166 US 45 Degree ID Numbers & Letters (Red)

This sheet is identical to the previous example except that all the characters are offered in red.

72-167 US 45 Degree ID Numbers & Letters (Yellow)



48-431 Fw 190 Butcher Birds Part VII

The final set in this group of 45° characters offers them in yellow.

72-168 WWII RAF Code Letters

This sheet offers a good selection of characters in either 24in. Sky or 30in. Medium Sea Grey. Approximately half of the sheet is used for each option and with the smaller version that results in nearly 132 characters.

1/48th Scale

48-431 Fw 190 Butcher Birds Part VII

- 1. Fw 190A-4, W/Nr. 5304 flown by Oblt. Johannes Seifert, Kommandeur of I./JG26



72-168 WWII RAF Code Letters

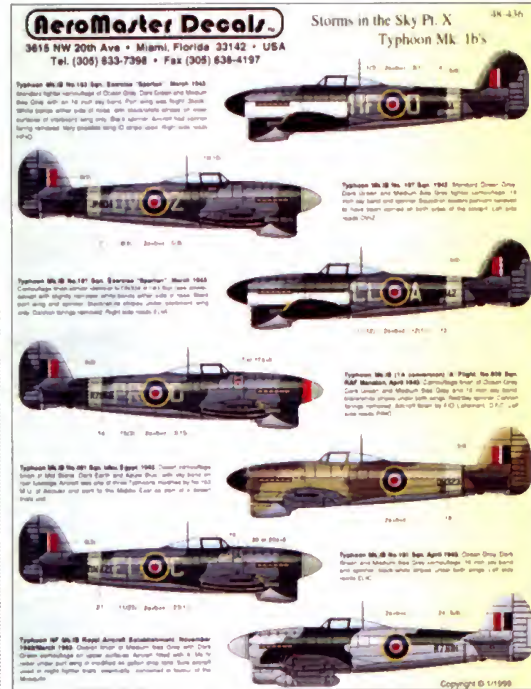
based at St. Omer, France in 1942. This machine is RLM 74/75 over 76 with a yellow (RLM 04) lower engine cowl and rudder.

- 2. Fw 190A-4, flown by Oblt. Hannes Trautloft the Kommodore of JG54, based at Krasnogvardeisk, Russia in December 1942. This is winter distemper over the RLM 74/75/76 scheme with the lower engine cowl, rear fuselage band and lower wingtips in yellow.

the Kommodore of JG2 based at Nidda, Germany in September 1944. Once again in RLM 74/75/76 with the lower engine cowl and rudder in yellow.

48-431 Fw 190 Butcher Birds Part VIII

- 1. Fw 190A-6, W/Nr. 530106 of Obfw. Hans Güttenke of 3./JG11 based at Husum, Germany in August 1943. This machine is RLM 74/75 over 76 with the lower engine



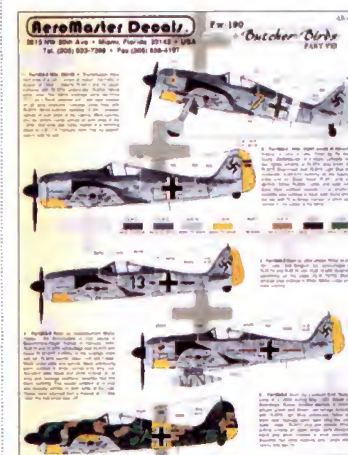
48-436 Storms in the Sky Pt X - Typhoon Mk 1b's

- 3. Fw 190A-4 flown by Maj. Hubertus von Bonin based at Dorpat, Estonia in June 1943. This aircraft is (possibly) RLM 81/82 and 79 over 76 with the lower cowl and wingtips, fuselage band and rudder in yellow.
- 4. Fw 190A-6 flown by General-Major Adolf Galland, General de Jagdflieger, Berlin-Tempelhof in March 1944. This machine is RLM 74/75 over 76 with the lower engine cowl in yellow.
- 5. Fw 190A-8 flown by Oblt. Kurt Bühligen

- cowl in yellow.
- 2. Fw 190A-2, W/Nr. 25207 flown by Fw. Adolf Glunz the Staffelführer of 4./JG26 based at Abbeville, France in June 1942. This machine is RLM 74/75 over 76 with the lower engine cowl and rudder in yellow.
- 3. Fw 190A-8 flown by Oblt. Joseph Priller based in Belgium in June 1944. This is also RLM 74/75 over 76 with the lower engine cowl and rudder in yellow.
- 4. Fw 190A-5 flown by Oblt. Walter Oesau, Kommodore of JG2 based at Beaumont-le-Roger, France in February 1943. Once again this is an RLM 74/75/76 scheme with the yellow engine cowl and rudder.
- 5. Fw 190A-5 flown by Lt. Emil 'Bully'



72-167 US 45 Degree ID Numbers & Letters (Yellow)



48-431 Fw 190 Butcher Birds Part VIII

Lang, 5/JG54 based at Siverskaya, Russia in May 1943. This machine is in a unique green and brown scheme with the lower engine cowl and wing tips, fuselage band and lower section of the rudder in yellow.

48-436 Storms in the Sky Pt X - Typhoon Mk Ib's

- 1. DN334, HF-D of No. 183 Squadron, Exercise 'Spartan', March 1943. This machine is Ocean Grey (OG) and Dark Green (DG) over Medium Sea Grey (MSG) with a Sky fuselage band and black spinner.
- 2. JP504, OV-Z of No. 197 Squadron, 1943. This is OG, DG & MSG with a Sky spinner and fuselage band.

- 3. R8742, EL-A of No. 181 Squadron during Exercise 'Spartan' in March 1943. This machine is in the same scheme as option 1.
- 4. R7855, PR-D of A Flight, No. 609 Squadron, RAF Manston, April 1943. This machine is in the same scheme as option 2, although the spinner is red at the back and Sky on the front.
- 5. DN3232 of No. 461 Squadron, Idku, Egypt in 1943. This machine is Mid Stone and Dark Earth over Azure Blue with a Sky fuselage band and black spinner.
- 6. DN421, EL-C 'Doreen' of No. 181 Squadron, April 1943. This machine is OG

and DG over MSG with a Sky fuselage band and spinner.

- 7. R7881 of the Royal Aircraft Establishment (Farnborough), November 1942 - March 1943. This machine is MSG overall with a disruptive camouflage pattern of DG on the upper surface. This aircraft was used for A.I. Mk IV trials.
- 8. EK273, JE-DT of No. 195 Squadron, June 1943. This is OG and DG over MSG with a Sky spinner and fuselage band.

Options 1 and 3 have the port lower wing in black, while options 2, 4, 6 and 8 have ID stripes on the lower wing surface.

Each of these sheets includes a selection

of national insignia along with all the unique markings for each option. There are no stencils included on any of the sheets featured.

Our thanks to AeroMaster Products for the review samples.

Information

Worldwide Enquiries:

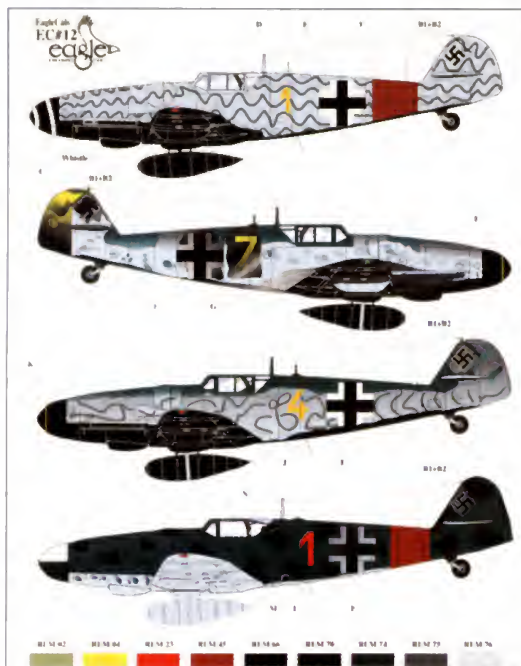
AeroMaster Products,
2615 NW, 20th Avenue, Miami, Florida FL
33142, USA.
Tel 305 635 3134
Fax: 305 638 4197
UK Sources: Athena Books & Hannants.

EagleCals

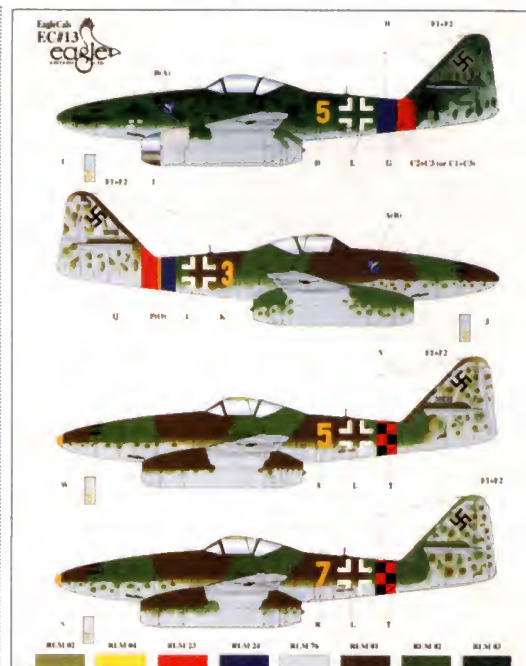
The latest two sheets in this range have made their way to us for review directly from the manufacturer.

EC#12 Bf 109G-6's JG 300 'Wilde Sau'

- 1. 'Yellow 1', W/Nr. N/K, flown by Lt. Manfred Dieterle, 3./JG 300, Bonn-Hangelar, Germany on the 6th March 1944. This machine is RLM 76 overall with an experimental application of RLM 75 in wavy lines along the fuselage and wings. The undersurface is black and the RVD band is either red primer or RLM 23.
- 2. 'Yellow 7', W/Nr. N/K, 3./JG 300, Bonn-Hangelar, Germany, February 1944. This was originally RLM 74/75 over 76, although the undersurface has been partially overpainted with black. The yellow rudder and fuselage markings have also been toned down with black.
- 3. 'Yellow 4', W/Nr. N/K, flown by Manfred Dieterle, 3./JG 300, Bonn-Hangelar, Germany, 12th April 1944. This aircraft had the fuselage sides in RLM 76 that had been darkened with RLM 75, the fuselage spine is RLM 74/75 and the lower surface is black.
- 4. 'Red 1', W/Nr. N/K flown by Lt. Manfred Dieterle, 2./JG 300, Herzogenaurach, Germany, 26th March 1944. This machine had an experimental scheme applied at unit level. The upper surfaces appear to be RLM 74/75 with a very dark grey randomly applied in spots. The undersurfaces are RLM 76 spotted with RLM 75. Note that



The four options on EC#12



The four options on EC#13

the instruction sheet comes with an addendum in relation to this machine which replaces the colour information given on the main instruction sheet. Those listed here are the amended versions.

The sheet comes with a full colour set of instructions as usual, but there is also a single sheet with six clear black and white photographs of the aircraft concerned. This is an excellent idea and Eagle Editions are to be congratulated for the inclusion of

such pictures as they are invaluable to modellers attempting to apply the correct 'random' camouflage patterns, and for general detail checks while modelling. I hope that this feature is going to become common in future EagleCal releases, and other decal manufacturers should take note.

This sheet comes in both 1/48th and 1/72nd scale, and the 1/48th scale version we had included all national insignia for each option plus one complete set of stencils.

EC#13 Me 262A-1a's KG(J)6 & JG7

- 1. 'Yellow 5', W/Nr. 110007 of III./JG7 operating from Cell-Hamburg, Germany, 8th May 1945. This machine was RLM 81/82 over 76. The fuselage sides were heavily mottled with RLM 81/82 and the red and blue RVD band was applied on the rear fuselage.
- 2. 'Yellow 3', W/Nr. 501221 of III./JG7, Koltze, Germany, April 1945. This was in the same scheme as the previous option, although the fuselage sides are less densely mottled.
- 3. 'Yellow 5', W/Nr. 501232 of KG(J)6 on the 6th May 1945. This machine was RLM 81/82 over 76 and carries red and black checks on the aft fuselage. This is one of the machines previously thought to be part of the ISS (Factory Protection Flight) with green/blue checks, but Eagle Editions

state that new information indicates that this is not the case.

- 4. 'Yellow 7', W/Nr. N/K of KG(J)6 in May 1945. This machine is in the same scheme as the previous option.

The instructions are in full colour with this set, although there are no additional reference photographs this time. The decal sheet can be obtained in 1/72nd or 1/48th scale and the 1/48th scale version we have has all the unique markings for each option plus national insignia for each and one complete set of stencils.

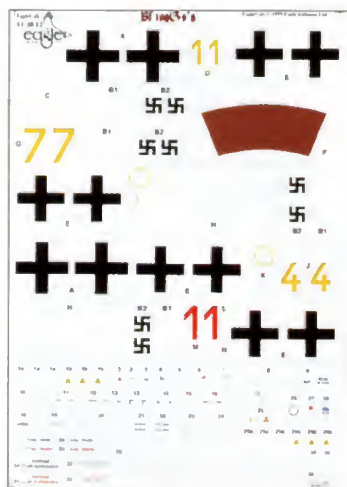
Overall all of these sheets are highly recommended. The inclusion of those photographs in EC#12 is a very good one, and one we all hope becomes standard in future. Although we have no confirmed UK price on these sheets, they are currently listed by the manufacturer as being \$9.00 each.

Our thanks to Eagle Editions for the review samples.

Information

Worldwide Enquiries:

Eagle Editions Ltd, P.O. Box 580, Hamilton,
MT 59840, USA.
Tel: 406 363 5415
Fax: 406 375 9270
Email: eagle@bitterroot.net



The decal sheet from the 1/48th scale version of EC#12



The decal sheet from the 1/48th scale version of EC#13

Eduard M.A.

As always, there is a mass of new etched brass detail sets from Eduard this month.

Subject: Ilyushin Il-2m3 Stormovik

Scale: 1/72nd

Product No.: 72-253

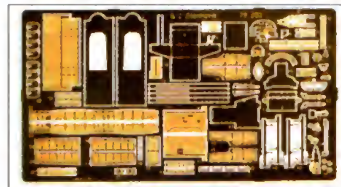
Type: Detail Set

Designed for: Eduard kit

Parts: Etched 95, Acetate 1

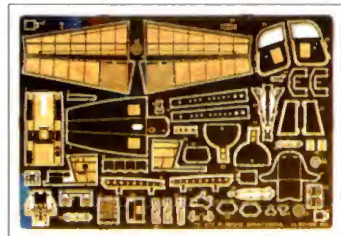
Price: £6.45

This set offers mainly new details for the cockpit interior, although there are a few additional parts for the undercarriage etc. In the cockpit area you get seat harness, rudder pedals, ammo belts and chutes, gun ring, sidewalls, instrument panel (with acetate backing film), seat and head armour and



72-253 Il-2m3 Stormovik (Eduard)

the floor for the rear gunner's position. The other components include an interior 'tub' for the ventral radiator unit, wheel well inserts, new fins and racks for each bomb, forward ring sight, sand filter screen, undercarriage doors and a number of control surface actuating units.



72-277 Bell P-39Q/N (Academy)

Subject: Bell P-39Q/N Airacobra

Scale: 1/72nd

Product No.: 72-277

Type: Detail Set

Designed for: Academy kit

Parts: Etched 54, Acetate 2

Price: £5.45

This set offers new floor, sidewall and instrument panel (with acetate backing film) for the cockpit, along with a new seat, harness and access door. Externally there are the ventral radiator outlet flaps, torque links and actuators for the main and nosewheel oleos and a complete set of doors for each wheel well. The set is completed with new fins for the bomb and a simple set of flaps.

Subject: Bell OH-13S Sioux

Scale: 1/72nd

Product No.: 72-278

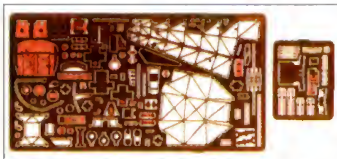
Type: Detail Set

Designed for: Italeri kit

Parts: Etched 140, Acetate 2

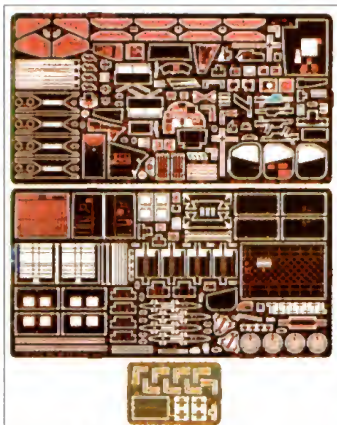
Price: £6.45

This two-fret set offers a mass of 'scale' details to replace those in the kit, although flat etched brass is, I feel, a little ineffective



72-278 Bell OH-13S Sioux (Italeri)

as a replacement for the tubular structure of the model. That said this set offers a new boom and engine frame. The ventral fin is also supplied along with a mass of details for the engine and rotor head. There are a lot of new components in the cockpit to complete the upgrade and these include a new rear bulkhead, floor plates, seat harness and central control console (with acetate backing film). The final details include latches etc for the doors and the straps for the fuel tanks.



72-285 Mil Mi-24 Hind (Hasegawa)

Subject: Mil Mi-24 Hind

Scale: 1/72nd

Product No.: 72-285

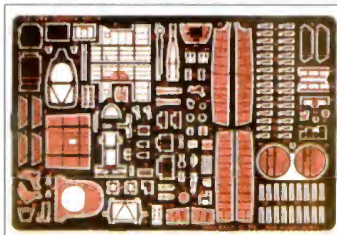
Type: Detail Set

Designed for: Hasegawa kit

Parts: Etched 251, Acetate 12

Price: £8.45

This three-fret sets offers a wealth of new details for the Hasegawa kit. These include floor, sidewalls, rudder pedals, instrument panel (with acetate backing film) and seat harness for each cockpit. The mid-decking and HUD are also given, while the cargo/troop cabin gets a mass of details on the floor and sidewalls. A set of folding seats for the cabin along with replacement doors (and glazing) is present so that all the new interior can be shown off. A little bit of surgery is required on the kit canopy, as the hinged forward and aft sections can be posed open using the additional parts offered in this set. Externally there are details for the undercarriage, main rotor



72-288 Spitfire Mk IX (Italeri)

head and a mass of revised parts for the weapons, such as launcher rail details, chaff dispensers and fronts to the rocket launchers. The final details are the mass of whip and blade antenna that cover the Mi-24.

Subject: V.S. Spitfire Mk IX

Scale: 1/72nd

Product No.: 72-288

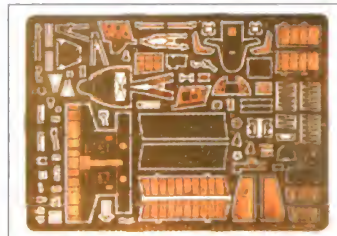
Type: Detail Set

Designed for: Italeri kit

Parts: Etched 147, Acetate 3

Price: £6.45

This set offers the usual details for the cockpit and exterior of the Spitfire. In the cockpit you get new sidewall frames, onto which go all the controls, boxes etc. The frame, seat armour and seat (with harness) are completely replaced in this set and, as usual, you get a new instrument panel with acetate backing film. Externally there are compression links for the undercarriage legs and wheel well roof inserts. The radiators get new rear flaps and internal matrix. The final details include the trim tab linkage, rear view mirror, carburettor air intake screen and GGS details. As usual this set also includes a set of flaps and a large number (54) of the parts are used in making these up.



72-289 Hawker Hurricane Mk IIB (Revell)

Subject: Hawker Hurricane Mk IIB

Scale: 1/72nd

Product No.: 72-289

Type: Detail Set

Designed for: Revell kit

Parts: Etched 120, Acetate 3

Price: £TBA

This set offers new sidewall details for the cockpit area, plus the escape door, instrument panel (with acetate backing film), rear bulkhead and rudder kick-plates. A new seat with harness is also included along with the chain linkage for the control column. Externally you get a new radio mast, grab handles for the canopy, a new rear view mirror and a completely new wheel well bay. The ventral radiator gets a new rear flap as well as matrix inside. The final parts are the rudder trim tab linkage, anti-dazzle guards, footstep and, of course, flaps

Subject: N.A. P-51B Mustang

Scale: 1/72nd

Product No.: 72-290

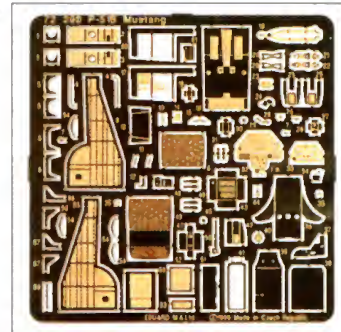
Type: Detail Set

Designed for: Revell kit

Parts: Etched 77, Acetate 2

Price: £5.45

This is another set for one of the recent Revell kits and it offers the usual interior details comprising sidewalls, rear bulkhead, seat and harness, floor, radio rack and instrument panel with acetate backing.



72-290 N.A. P-51B Mustang (Revell)



72-291 Nakajima Ki-27 Nate (Hasegawa)

Externally you get separate radiator flaps, air intake support rod, torque links for each oleo leg, wheel well roof and side details and finally the pitot head and sway braces and linkage on the ventral fuel tank.

Subject: Nakajima Ki-27 Nate

Scale: 1/72nd

Product No.: 72-291

Type: Detail Set

Designed for: Hasegawa kit

Parts: Etched 48, Acetate 2

Price: £TBA

This little fret offers sidewalls, rudder pedals, rear bulkhead, control consoles, seat, harness and instrument panel with acetate backing film for the cockpit interior. Externally there is the canopy rear-view mirror, tie-down loop on the tailskid, support beam on the mainwheel spat, antenna mast, pitot, wingwalk tread plate and, finally, a complete set of flaps.

Subject: Fieseler Fi 156 Storch

Scale: 1/72nd

Product No.: 72-292

Type: Detail Set

Designed for: Academy kit

Parts: Etched 66, Acetate 1

Price: £TBA

This fret offers a harness for the pilot's seat, sidewall frames, instrument panel (with acetate backing film) and support frame, rudder pedals and seat support frames for the cockpit area. The framework inside the glazing is also included along with details for the crew access door. The vast majority of the components in this set are for the slats and flaps. All of the links for the flaps along with the counterweights are there to



72-292 Fieseler Fi 156 Storch (Academy)

replace the moulded components in the kit. The links for the leading edge slats are also included, as those in the kit are a little thick. The final details are the radio mast, ignition harness on the engine, rear tailplane supports and the tailwheel bracket.

Subject: Iluyshin Il-2 Single Seat

Scale: 1/48th

Product No.: 48-255

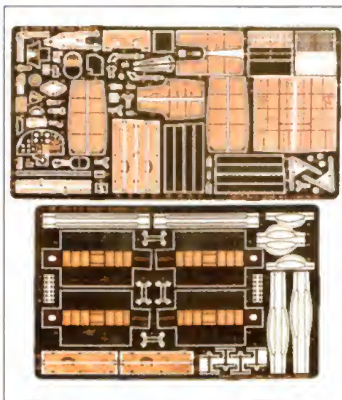
Type: Detail Set

Designed for: Accurate Miniatures kit

Parts: Etched 142, Acetate 1

Price: £8.45

This two-fret set offers seat belts, instrument panel with acetate backing film, side console details, rudder pedals and side wall details for the cockpit area. Externally there are internal details for the ventral radiator, canopy frame, trim tab linkage and ring sight. The undercarriage bays get both internal details and a new set of doors. The air intake filter screen is also replaced and this set gives you all the necessary parts to open up the bomb cells in the inner wing panels, although you will have to find suitable bombs to put in them from other sources. The final details are the linkages for the front and rear of each ski unit on the early versions of the Il-2.



48-255 Il-2 Single Seat (Accurate Miniatures)

Subject: Grumman F8F Bearcat

Scale: 1/48th

Product No.: 48-256

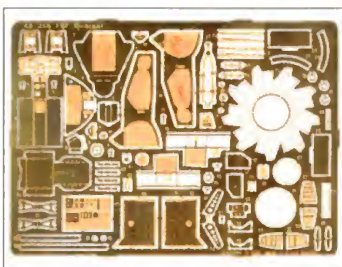
Type: Detail Set

Designed for: Hobbycraft kit

Parts: Etched 90, Acetate 3

Price: £5.45

In this set you get sidewall details, a new instrument panel with acetate backing film, side consoles, rear armoured bulkhead and seat and harness. Externally you get the matrix for the intakes, a separate set of cooling gills and new undercarriage and tailwheel doors. The ignition ring is also included as are the roll-over frame, ventral strake and drop tank sway braces.



48-256 Grumman F8F Bearcat (Hobbycraft)

Subject: Republic F-84G Thunderjet

Scale: 1/48th

Product No.: 48-257

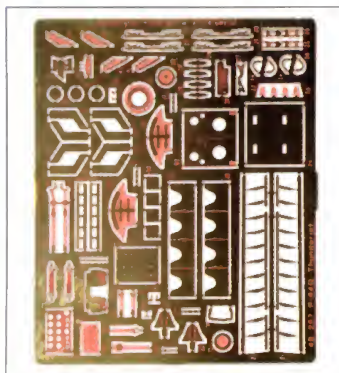
Type: Detail Set

Designed for: Tamiya kit

Parts: Etched 80, Acetate 1

Price: £5.45

This offers a replacement instrument panel and acetate backing film, side console details and a number of detail parts including the harness for the ejection seat. There is also a rear view mirror for the canopy and the perforated or 'cheese-grater' airbrake. The internal details and linkage for the flaps are also included as are details for each wheel well. The nose leg gets replacement linkage and the main legs have new compression links. The final items are for the RATO bottles, the ammo tracks, pylon sway braces and the fins for the bombs.



48-257 Republic F-84G Thunderjet (Tamiya)

Subject: Junkers Ju 87D Stuka

Scale: 1/48th

Product No.: 48-258

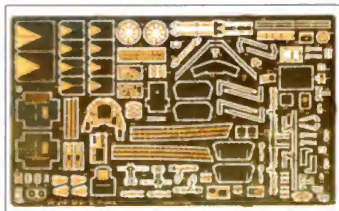
Type: Detail Set

Designed for: Hasegawa kit

Parts: Etched 115, Acetate 9

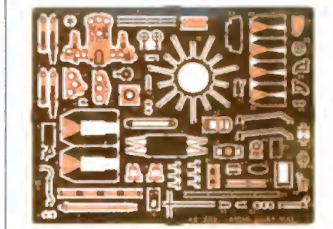
Price: £6.45

The single fret offered in this set gives a mass of details for the sidewall panels and floors of this kit. The ammo boxes for the rear gunner's position are also included, as are the rudder pedals and instrument panel with acetate backing film for the pilot's



48-258 Junkers Ju 87D Stuka (Hasegawa)

position. A new seat, harness and armour are also included for the pilot, as is a replacement seat frame for the gunner. The final details in the cockpit are replacement fronts for the radio units with acetate backing films. Externally there are details for the canopy and the armour plates for the rear gun position. The tie-down eye on the tailwheel is included, along with replacement hubs for the mainwheels. Thankfully the tread-plates for the wings are also given and the final details are all the linkages for the control surfaces and new fins for the bombs.



48-259 Aichi D3A Val (Hasegawa)

Subject: Aichi D3A Val

Scale: 1/48th

Product No.: 48-259

Type: Detail Set

Designed for: Hasegawa kit

Parts: Etched 74, Acetate 4

Price: £4.45

This set offers a new instrument panel with acetate backing film, sidewall details, seat harness and rudder pedals for the cockpit interior. Externally there is a ring sight, ignition ring for the engine, access step, trim tab linkage and a complete set of fins for the bombs.

Subject: Republic P-47D Razorback

Scale: 1/48th

Product No.: 48-273

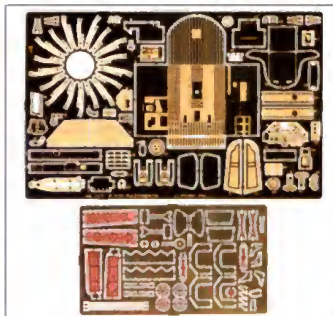
Type: Detail Set

Designed for: Hasegawa kit

Parts: Etched 114, Acetate 3

Price: £6.45

A completely new cockpit 'tub' is offered in brass, into which goes the new instrument panel with acetate backing film, rudder



48-273 Republic P-47D Razorback (Hasegawa)

pedals, seat, harness and side consoles. External details include the exhaust outlets, oil cooler matrix, wheel well ribs, engine ignition harness, undercarriage doors and compression links. The sway braces and filler point are given for the fuel tank and the final details include the supercharger doors, bomb fins and replacement doors for the tailwheel.

Subject: Hawker Typhoon Mk Ib

Scale: 1/48th

Product No.: 48-275

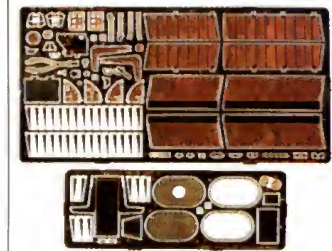
Type: Detail Set

Designed for: Hasegawa kit

Parts: Etched 112, Acetate 7

Price: £6.45

This offers a new seat and harness, chain for the control column, side console control levers, instrument panel with acetate backing film, rudder pedals, throttle box and the filler plates for the framework for the cockpit interior. Externally you get the matrix etc for the ventral radiator unit, the rear flap for the chin cowl and a complete



48-275 Hawker Typhoon Mk Ib (Hasegawa)

set of flaps with internal ribs. The latter items take up a lot of the components in this set.

Subject: Messerschmitt Bf 109E-3/4/7

Scale: 1/48th

Product No.: 48-276

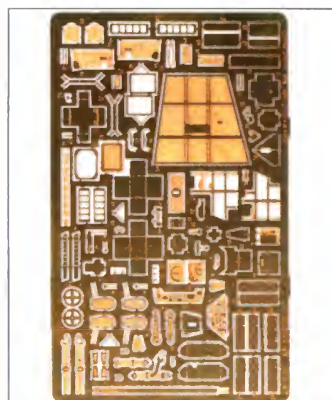
Type: Detail Set

Designed for: Tamiya kit

Parts: Etched 106, Acetate 2

Price: £TBA

This set offers a new instrument panel with acetate backing film, trim-tab wheel and chain, seat rails, seat adjustment lever, seat harness, rudder pedals and a mass of sidewall details for the cockpit area. Externally there are new flaps for the radiators in the wing, and under the chin. The radio equipment hatch in the rear fuselage is included, so with a little surgery



48-276 Messerschmitt Bf 109E-3/4/7 (Tamiya)

you can open this up and add the radio units supplied in this set. The remaining items are new perforated barrels for the nose machine guns, compression links for the oleo legs, the retaining strap for the drop tank and the tie-down eyelets for each lower wingtip.

Conclusion: Overall each of these sets is to the usual high quality we have come to expect from Eduard. The replacement of certain items such as radio masts and tubular structures with two-dimensional brass is not a great idea, but the other items that these sets offer are well worth considering.

Our thanks to Four Plus UK and Eduard M.A for the review samples.

Information

Worldwide Enquiries:

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Czech Republic.
Tel: 420 35 6118259 Fax: 420 35 6118186
Email: info@eduard.cz
UK sources: Four Plus UK & Hannants

Paragon Designs

The most recent conversions from this manufacturer have been passed directly to us for review.

Subject: Avro Manchester Mk I/la

Scale: 1/72nd

Product No.: 72050

Type: Conversion

Designed for: Airfix Mk I/III Lancaster kit

Parts: Resin 52, Vac-formed Clear 4

Price: £27.99

We have been waiting a while for this conversion set and it has been well worth it.

The set itself will require some surgery on the Airfix kit before you can get started, and the instruction sheet in the conversion does include clear diagrams and measurements that will allow you to undertake this work. The outer wing panels and inner engine mount have to be sawn off, as does the upper turret surround and the forward sections of the inner engine units. Once you have done all of this, you

can simply fit all the new resin components. The engine nacelles come with the option of two types of exhaust stack, with or without the flame dampers. The remaining replacement parts include the tail, dorsal fin, outer wing panels, upper and rear gun turret, 'weighted' mainwheels and the forward bomb-aimer's nose transparency.

If you want to make a Mk Ia then the standard tail assembly without the dorsal fin should be used with the remaining components of this kit.

Subject: Avro Manchester Mk I/la

Scale: 1/48th

Product No.: 48127

Type: Conversion

Designed for: Tamiya Mk I/III Lancaster kit

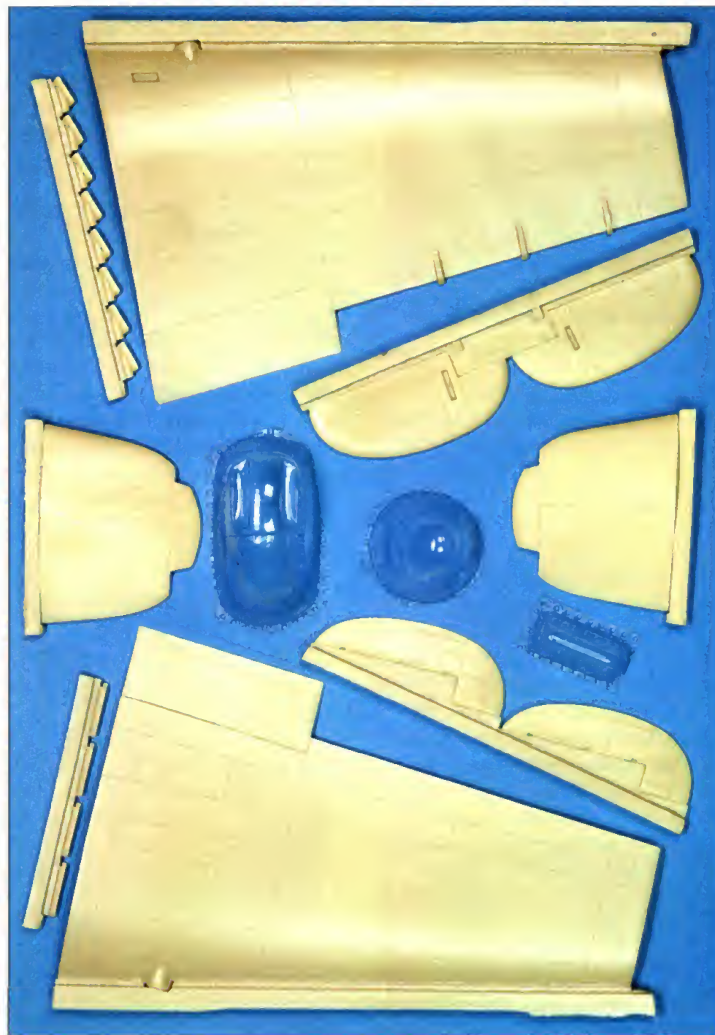
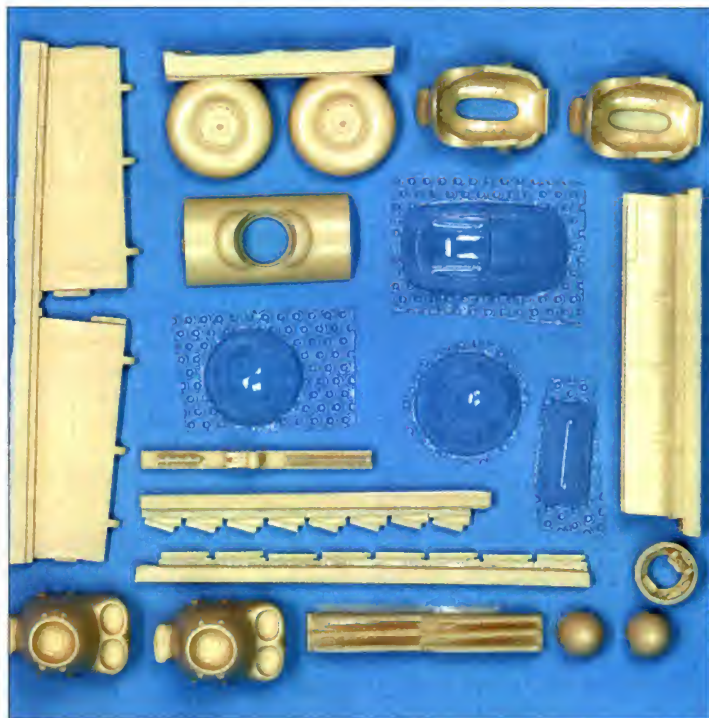
Parts: Resin 55, Vac-formed Clear 3

Price: £49.99

This set is identical in subject but is designed for use with the Tamiya 1/48th scale kit.



All the components for 72050 (Airfix kit)



of these conversions well worth having. I like the use of the two-part wings as this reduces the overall weight of the end product and I for one am looking forward to adding the 1/48th scale version to my collection.

Our thanks to Paragon Designs for the review samples.

The conversion is the same as the 1/72nd scale version, however due to the scale some of the resin components have been approached in a different manner. The measurements for the sections of the kit to be removed are once again included on the instructions. The outer wing panels are offered as two-part assemblies with the tips separate.

The entire tail assembly is replaced with separate control surfaces and the main wheels are 'weighted' as is the vogue of late. Two styles of exhaust stack are included as with the smaller scale version. The engine nacelles are approached differently in this bigger scale, as solid ones like those in the 1/72nd scale example would be too heavy (and expensive) in this scale. Therefore the main nacelle body is one piece, while the front piece is another.

Conclusion: Well, what do you think? The quality of the casting coupled with clear instructions and a unique subject make both



The components of 48127 (Tamiya kit)

Information

Worldwide Enquiries:

Paragon Designs, 39, Cantley Lane,
Norwich, Norfolk, NR4 6TA
Tel: 01603 507152
Fax: 01603 506057

Model Art Decal System

The latest conversion set from this manufacturer has been sent directly to us for review.

Subject: N.A. F-86K Sabre

Scale: 1/72nd

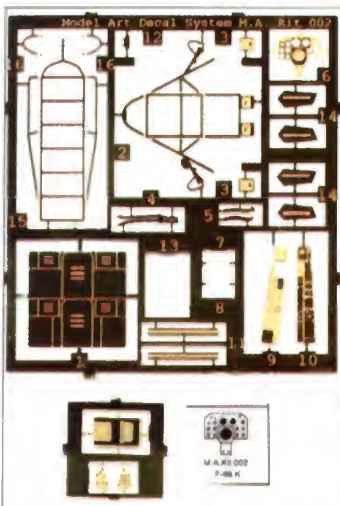
Product No.: M.A. Kit 002

Type: Conversion

Designed for: Hasegawa F-86D kit

Parts: Resin 6, Etched Brass 23 Decal Options 8

Price: ETBA



The etched brass fret and acetate film from M.A. Kit 002

This conversion, although listed as being based on the Hasegawa F-86D kit, does in fact utilise very little of it. About all you are left with of the kit are the undercarriage,

tailplanes, canopy etc.

The main resin parts in this kit are the fuselage and one-piece wing. The cockpit area of the fuselage has to be detailed with the new resin ejection seat and instrument panel and upper coaming. To the latter item an etched instrument panel is added and on the ejection seat you can add the seat belts that are supplied on the etched fret. The cockpit interior is finished off with side console details that are also supplied as etched brass. An access ladder is also included.



The resin components of the F-86K conversion

The wings are cast as one-piece and the leading edge slats are separate. All you have to do is add the undercarriage etc from the Hasegawa kit and then fit the complete wing to the new resin fuselage.



The excellent decal sheet from M.A. Kit 002

To complete this conversion the set comes with an excellent decal sheet that offers the following options:

- 1.54860, E.C. 1/13 'Artois', French Air Force (FAF) based at Colmar in 1960.
- 2. 54829, E.C. 2/13 'Alpes', FAF, based at Colmar in 1961.
- 3. 54841, E.C. 2/13 'Alpes', FAF, based at Colmar in 1962.
- 4. 54863, E.C. 3/13 'Auvergne', FAF, based at Colmar in 1962.
- 5. 41313, 339 Skv, Royal Norwegian Air Force, based at Bodø in 1962.
- 6. 54818, 51st Stormo, 22^o Gruppo, Italian Air Force, Treviso-Istrana in 1960.
- 7. JD-117, IG74, German Air force, Neuberg in 1963.
- 8. Q-283, No. 500 Squadron, Koninklijke Luchtmacht, based at Twente in 1962.

All of these options bar No.7 are in natural metal overall with an Olive Drab. Option seven is NATO Dark Grey and NATO Dark Green over matt Silver Grey.

Conclusion: This is an excellent conversion. The quality of the resin components is of the highest and the etched brass detail parts just add to the overall appeal of the product. It is nice to have colour options for the conversion once completed, but the inclusion of eight in this one is just spoiling you!

Our thanks to Model Art Decal System for the review sample.

Information

Worldwide Enquiries:

Model Art Decal System, P.O. Box 64,
Bury, Lancs. BL9 0SF
Tel/Fax: 01706 827500

Eduard M.A. (Pt. 2)

Although we have already looked at a number of new etched sets from this manufacturer this month, there is a new series of sets that has just been released that we thought we should mention.

The series is called 'Zoom' and as the name implies it is a quick etched set that offers replacement details for the subject kit without the need for surgery. The sets do not include correction parts and each is nickel plated, so they look like steel. The first four sets in this series are as follows.

Subject: Focke Wulf Fw 190D

Scale: 1/72nd

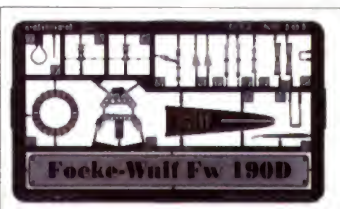
Product No.: SS 101

Type: Detail Set

Designed for: Academy kit

Parts: Etched 18, Acetate 2

Price: ETBA



SS101 Focke Wulf Fw 190D (Academy)

This set offers new seat harness, rudder pedals, instrument panel with acetate backing film, upper decking, engine cowl grill, oleo leg compression links, canopy grab handles, access step, DF loop and FuG 16ZY antenna. It also includes a



SS 103 Panavia Tornado IDS (Revell)

nice name plate as well, for all of you who want to add this to your model base.

Subject: Panavia Tornado IDS

Scale: 1/72nd

Product No.: SS 103

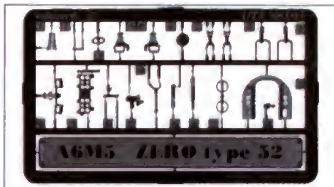
Type: Detail Set

Designed for: Revell kit

Parts: Etched 24, Acetate 2

Price: ETBA

This set includes rudder pedals, ejection seat harness, instrument panel with acetate backing film, HUD frame,



SS 104 Mitsubishi A6M5 Type 52 Zero (Academy)

afterburner frame and a complete set of rear view mirrors for the canopy.

Subject: Mitsubishi A6M5 Type 52 Zero

Scale: 1/72nd

Product No.: SS 104

Type: Detail Set **Designed for:** Academy kit

Parts: Etched 21, Acetate 2

Price: ETBA

This set comprises a new instrument panel with acetate backing film, rear bulkhead, rudder pedals, seat harness, throttle lever, DF loop, air intake matrix, undercarriage door actuating linkage, crew step and compression links for each oleo leg.

Subject: N.A. P-51B Mustang

Scale: 1/72nd

Product No.: SS 105

Type: Detail Set **Designed for:** Revell kit

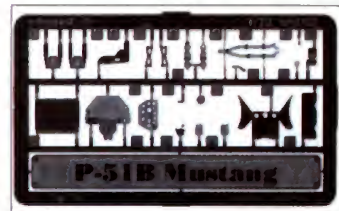
Parts: Etched 23, Acetate 2

Price: ETBA

This set offers the matrix for the radiator,

side console details, seat and harness, instrument panel and acetate backing film, rudder pedals, undercarriage leg compression links and pitot head.

Conclusion: Overall this is a neat and effective system that I am sure many modellers will want to use. The limited number of parts coupled with the removal



SS 105 N.A. P-51B Mustang (Revell)

of the need to do any correction work to the kit will, I am sure, encourage a number of modellers who do not like etched brass to have a go with these sets.

Our thanks to Eduard M.A. for the review samples.

Information

Worldwide Enquiries:

Eduard M.A., 435 21 Obrnice 170,
Czech Republic.
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Email: info@eduard.cz
UK sources: Four Plus UK & Hannants

PJ Productions

The most recent releases from this manufacturer have been passed directly to us for review.

Subject: USAF Pilot - Korean War

Scale: 1/48th

Product No.: 481110

Type: Figure

Designed for: N/A

Parts: Resin 5

Price: BEF 150 (ETBA)

This figure is suitable for such types as the F-86, in which cockpit I think the painted



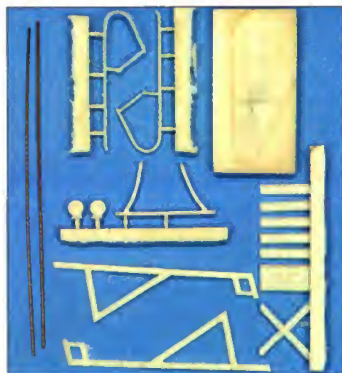
481110 USAF Pilot before....



... and after painting

figure is posed for the illustration included with it. The figure is cast as an upper and lower torso with separate arms and a length of oxygen tubing for the oxygen mask. The figure is cast giving the 'V' sign to the ground crew before (or after) an operation.

The level of detail and quality of the



321111 F-104 Ladder before ...

casting are excellent and the modeller will get excellent results from this set with careful painting etc.



....and after assembly

Subject: Modern Pilot US Type - Getting into an aircraft

Scale: 1/32nd

Product No.: 321101

Type: Figure

Designed for: N/A

Parts: Resin 9

Price: BEF 350 (ETBA)

This modern USAF pilot figure is depicted climbing the access ladder to get into his

plane. The figure itself is cast as an upper torso, legs, separate arms and two styles of head; one with the helmet and one without. A separate 'bone dome' is also included along with a length of tubing for the oxygen mask.

Subject: Access Ladder F-104

Scale: 1/32nd

Product No.: 321111

Type: Accessory

Designed for: Any F-104

Parts: Resin 17 & 2 Lengths of Wire

Price: BEF 300 (ETBA)



321101 USAF (modern) pilot before...



.... and after assembly

This item comes with the option of using the resin grab-rails or making up examples from the lengths of copper wire included. To bend these successfully there is a resin mould included.

Subject: Access Ladder Mirage

Scale: 1/32nd

Product No.: 321112

Type: Accessory

Designed for: Any Mirage

Parts: Resin 3

Price: BEF 200 (ETBA)

This simple set comprises the Mirage access ladder in two parts. The main body



321112 (Mirage Ladder) before ...



....and after assembly

of the ladder is one, and the support legs the other.

Conclusion: These are all excellent products, well cast and simple to use.

Our thanks to PJ Productions for the review samples.

Information

Worldwide Enquiries:
PJ Production,
Rue Albert 38,
B6280 Gerpinnes,
Belgium.
Tel/Fax: 071 50 44 93
UK Source: Avia Imports

Copper State Models

Three new etched detail sets have been sent directly to us by this manufacturer.

Subject: Spandau MG

Scale: 1/32nd

Product No.: CSM #125

Type: Accessory

Designed for: N/A

Parts: Metal 2, Etched Brass 24

Price: ETBA

This set offers two complete Spandau machine guns. The main breech assembly is supplied as a white metal casting and to this are added the outer perforated jacket, sights, cocking levers, safety catch, ammo belts and chutes. The only thing you will need to add is a length of suitable diameter tubing to represent the barrel of each unit.

Subject: British Gauge Set

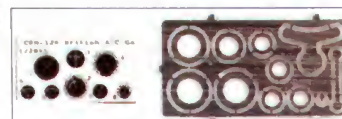
Scale: 1/28th

Product No.: CSM #128

Type: Accessory **Designed for:** N/A

Parts: Etched Brass 11, Acetate Film 9

Price: ETBA



British Gauge Set (CSM #128)

This set offers the following instruments that are suitable for British WWI era machines:

- 1. Air Speed Indicator
- 2. Altimeter
- 3. Compass
- 4. RPM Indicator
- 5. Air Pressure Gauge
- 6. Clock
- 7. Temperature Gauge

Subject: Sopwith Camel

Scale: 1/28th

Product No.: CSM #134

Type: Detail Set

Designed for: Revell or Hobbycraft kits

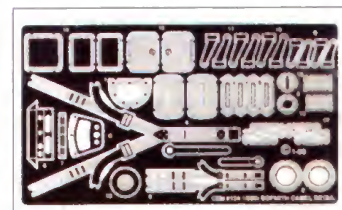
Parts: Etched Brass 38

Price: ETBA

This detail set offers the following details for

the Sopwith Camel kit:

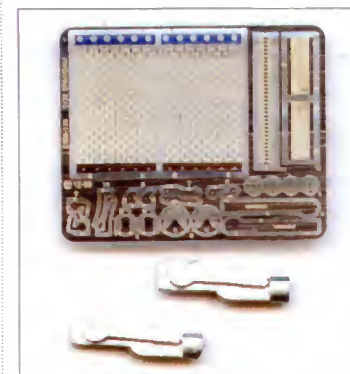
- 1. Pilot Step Cover
- 2. Petrol Caps (x2)
- 3. Petrol Cap Rings (x2)
- 4. Control Wire Grommets (x6)
- 5. Seat Belts (Lap & Shoulder)
- 6, 7 & 8. Throttle Quadrant
- 9. Control Horns (Wing)
- 10. Control Horns (Rudder)
- 11. Control Horns (Tailplanes)
- 12. Cowling Machine Gun Warning Plates
- 13. Manufacturer's Data Plate
- 14. Inspection Doors (Wing)
- 15. Machine Gun Cowl Access Doors (x2) - Square
- 16. Machine Gun Cowl Access Doors (x2) - Round
- 17. Rotherham Pump Bracket



Sopwith Camel Detail Set (CSM #134)

Conclusion: Overall these are well made sets that will add a lot to the subject models and each set can be recommended to all.

Our thanks to Copper State Models for the review samples.



Spandau MG (CSM #125)

Information

Worldwide Enquiries:
Copper State Models, 3245 E. Hillery Drive,
Phoenix, AZ 85032, USA.
Tel: 602 867 8822
UK Source: Aeroclub

Neomega Resin

Two of the most recent resin updates from this manufacturer have been passed to us by Parade Figures.

1/72nd Scale

Subject: Kamov Ka-29 Helix B

Scale: 1/72nd

Product No.: C28

Type: Detail Set

Designed for: Italeri kit

Parts: Resin 15

Price: £10.00

This set is cast in an odd metallic green colour, but the level of detail and quality of casting is to the highest standard. The only failing is that there are no instructions whatsoever, so you will need to have additional reference material to assist you in its use.

The set replaces most of the cockpit interior in the Italeri kit.

There are a new instrument panel, sidewalls, rear bulkhead, seats with moulded harness, overhead console, control columns and gunsights for the forward area. In the rear section there is a new bulkhead and control panel.



C28 Kamov Ka-29 Helix B (Italeri)

1/48th Scale

Subject: G.D. F-16C

Scale: 1/48th

Product No.: C25

Type: Cockpit Set

Designed for: Italeri kit

Parts: Resin 8

Price: £10.50

Once again this set comes in the odd coloured resin, but the level of detail and quality of the casting is excellent.

The main component is the new highly detailed cockpit 'tub'. Into this goes the ACES II ejection seat, which is highly detailed with the

harness moulded on as well. The decking behind the pilot's head is included, as are a new instrument panel and coaming. The final details are the control column, central instrument panel and both sidewalls.

Conclusion: The level of detail and casting quality is some of the highest you will see, and the only downside with these sets are the lack of any instructions and that odd resin colour. Other than that, these two sets can be highly recommended to all.

Our thanks to Parade Figures for the review samples.

Information

U.K. Source:

Parade Figures, 65 Shilton Road,
Barwell, Leics. LE9 8HB
Tel: 01455 230952 Fax: 01455 615747
Email: modelspot@diat.pipex.com



C25 G.D. F-16C (Italeri)

Lumír Vesely

The first resin conversion set from this manufacturer has been passed to us for review.

Subject: Heinkel He 111Z 'Zwilling'

Scale: 1/48th

Product No.: N/K **Type:** Conversion

Designed for: Revell-Monogram kit

Parts: Resin 23

Price: ETBA

This conversion comprises the new centre section of the wing, which is hollow cast with recessed panel lines. The modeller will have to rescribe most of these, as they are a little erratic in places. Five new propellers are also included, and these are of the correct style for the He 111Z and are direct replacements of the kit parts. The additional engine, a unit required to complete the model, is also included, and these components are (unless we are mistaken) direct copies of the kit parts, so you should have little trouble in using them. Note that the propeller included in the wafer with some of the engine parts is not required, as it is the same as included in the Revell/Monogram kit and is therefore inappropriate to this version. The final items included are five complete sets of flame damper exhaust stacks.



The He 111Z conversion

Achieving this conversion could be quite complex, as there are no instructions at all. Careful checking of the kit parts in comparison to the resin parts will be necessary to ensure that you do not cut things in the wrong place.

Conclusion: An effective conversion that is only marred by the lack of any form of instructions. One for the more experienced modeller with suitable

reference material we feel.

Our thanks to Lumír Vesely for the review samples.

Information

Worldwide Enquiries:

Copper State Models, 3245 E. Hillery Drive,
Phoenix, AZ 85032, USA.
Tel: 602 867 8822
UK Source: Aeroclub

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Lightning Strike



by Bill Clark

1/48th
SCALE

Part 1: The Single Seater

Introduction

The Lightning, let there be no doubt, was the greatest British military aircraft ever (Author stands back to dispense flares and chaff to avoid incoming missiles and abuse from strange people not sharing this view!). Admittedly it wasn't the prettiest, that was of course the Hunter (Author stands even further back!).

As Britain's first and last (therefore only) wholly home-bred interceptor capable of Mach 2+, it first entered frontline service in January 1960 with the F Mk 1 joining No.74 Sqn. The final version, the F Mk 6, was replaced in service in 1988 by the Tornado F.3, although the type's last 'military' flight took place in January 1993, ironically as part of its replacement's development programme.

English Electric, the type's designer and manufacturer, pushed the technological barriers to the extreme with their design, so much so that, at a time when 'traditional' manufacturers such as Hawker, with their Hunter, and Supermarine with the Swift, were struggling to come to

terms with swept-wing technology, the 'new kids on the block' had already decided on a 60° wing sweep-back on their prototype P.1A. In fact had it not been for the intervention of the SBAC boffins at Farnborough, who insisted on trialling less severe degrees of sweep-back on the Short SB.5 'Technology Trial Aircraft', the P.1A and P.1B would have flown earlier, the

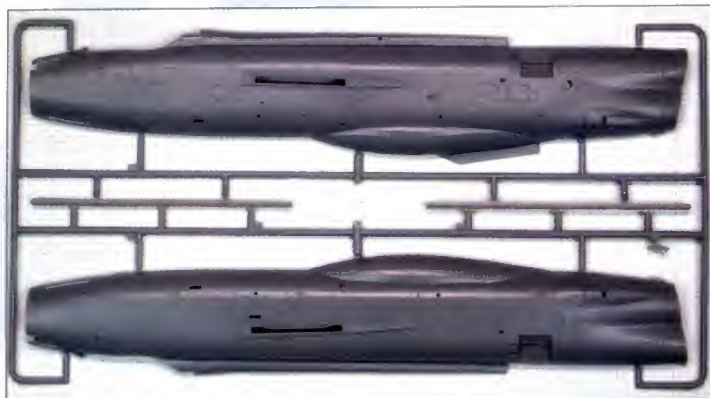
Lightning would have entered service sooner, and probably had a greater degree of success on the export market (although HM's Government hardly helped in this, but that's another story...).

In Model Form

The Lightning immediately caught the model manufacturers' attention in 1/72nd scale. Frog produced a P.1A and Airfix (I think) a P.1B. This I believe formed the basis of their famous F Mk 1A, as it retained some of the P.1B features. Its latest (and surely last) re-incarnation has been as a rather inaccurate F Mk 3, that still retains some of the P.1B features! This has been the only real attempt at the earlier marks in the ensuing four decades.

Hasegawa produced an F Mk 6 (with Frog initially sharing the moulds and then apparently producing their own, which has also recently 're-surfaced' under the Revell® banner) in the late sixties. This was re-vamped a few years ago, around about the same time as Airfix's F Mk 3. The final injection-moulded attempt at the Lightning was Matchbox's F Mk 2A/F Mk 6 (followed with a newly-tooled fuselage and re-issued as a two-seat T.55). Matchbox's F Mk 2A/F Mk 6 has luckily been re-released (in my opinion this is the best of a pretty poor bunch in this scale). There have of course been some conversion kits and detail sets produced.



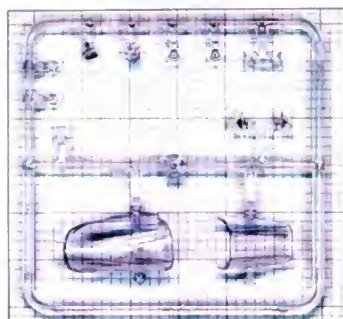


The fuselage parts for the F Mk 1, F Mk 1A, F Mk 2 & F Mk 3

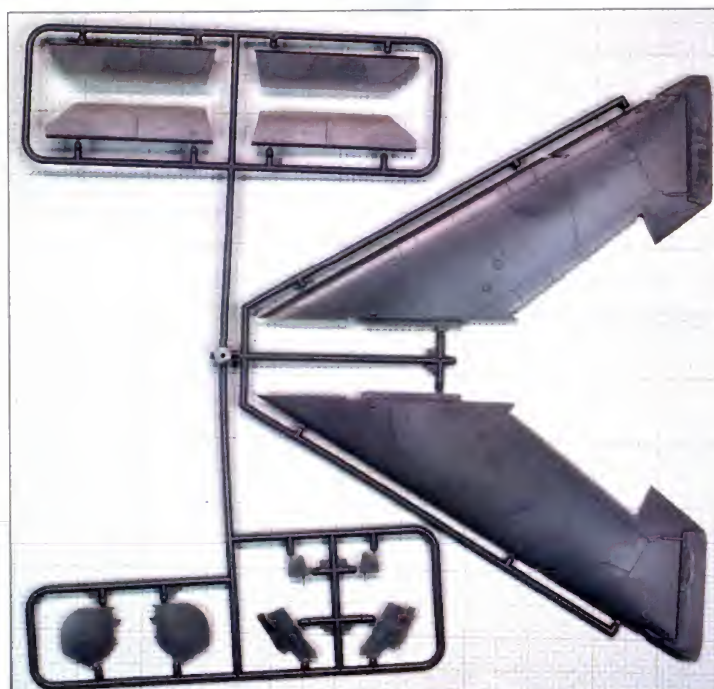


Common sprues included in both kits.
Note that the two different fins are included

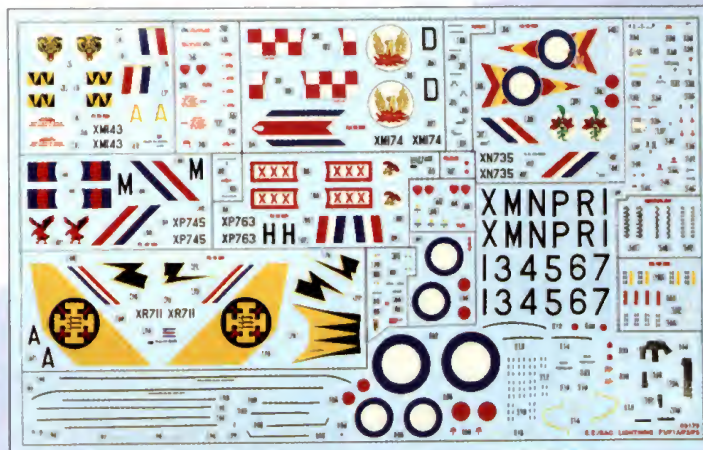
Technical Data	
Lightning F.1/F.1A/F.2/F.3 and F.2A/F.6.	
Manufacturer: Airfix	
Scale: 1/48th	
Price: £21.99	
Type: Injection moulded plastic	
Parts: Plastic 128 (Grey), Clear 13	
Decal options: 6	
Manufacturer: Humbrol Ltd., Marktleet, Hull Tel: 01482 701191	



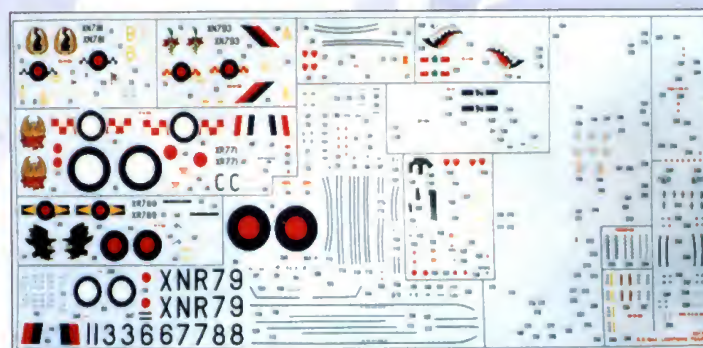
Common clear sprue included in both kits



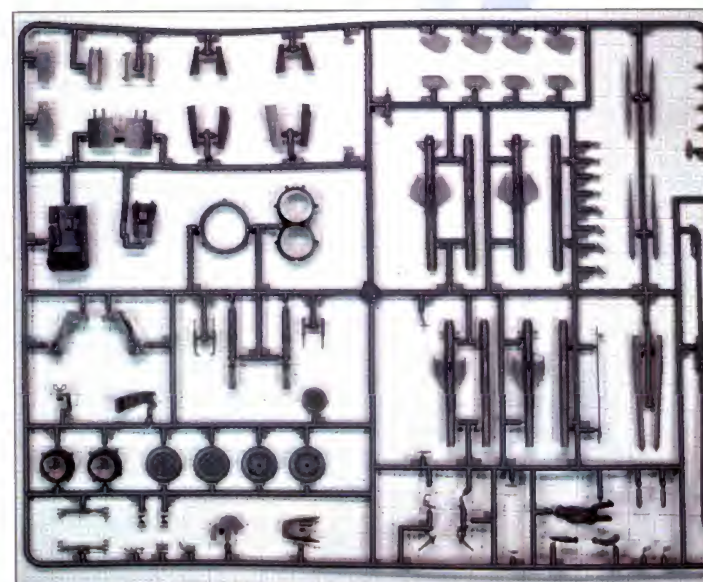
The wings for the F Mk 1, F Mk 1A, F Mk 2 & F Mk 3



No less than six options are included in the 'small tank/straight-wing' kits decal sheet...



... and another six in the 'big tank/kinked wing' kit



Common sprues included in both kits



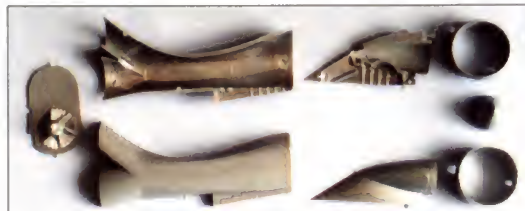
The fuselage parts for the F Mk 2a and F Mk 6

but surely it's time someone, somewhere, brought out a decent Lightning in 1/72nd scale! Not so much doom and gloom in the larger scales though. Echelon produced a stunning 1/32nd scale F Mk 2a/F Mk 6 vac-form and white metal example and in 1/48th Lightning Lovers have had a vac-form from 1D Models (not a bad job, from memory) and, of course, Aeroclub have more recently produced their innovative mixed-media kits. Airfix are therefore to be congratulated for producing injection moulded kits of Britain's finest in this scale (at last!).

The Kits

Two versions have been issued by Airfix. The first was the earlier 'small tank, straight-wing' version, enabling the F Mk 1, F Mk 1A, F Mk 2 & F Mk 3 to be modelled. The other was the 'large tank, kinked wing version', which allows the other single-seat marks to be built, namely the F Mk 2A (all converted from F Mk 2's) and the F Mk 6.

Airfix have provided a series of common parts in both kits and this means that there are a lot of extras for the spares box. The moulding is excellent, with



The intake trunking, with Aeroclub's white metal nose ring (bottom right)



The aftermarket resin ejection seat used in the F Mk 1A. The cockpit tub and panel is as supplied in the kit

delicately engraved panel lines, although some parts were slightly mis-formed on all the models I've purchased. The extreme trailing edges of the lower wings, for instance, were curled, although these were easily straightened out. More serious was the warpage that occurred in the F Mk 2A/F Mk 6 fuselage. These parts are

moulded to accommodate the different forward portions of the belly tank (with or without cannon), and as a result the plastic above, which also features rectangular slots to accommodate the wings, has less 'depth' and I think this causes the warpage. As to the wings, particularly on the F Mk 2A/F Mk 6, these required some serious bending and positioning when installing to portray the undercamber, curves and kinks of the real thing.



KMC's resin ejection seat was used in the F Mk 2A

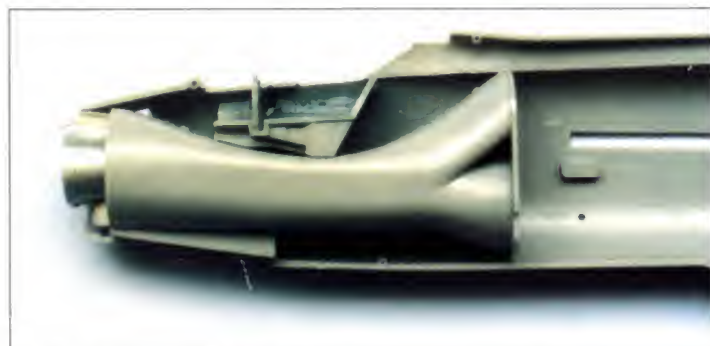


Jet pipe assembly parts

Accessories

I'll probably offend someone (as I'm sure to miss someone out) if I try to list all accessories and decals issued to augment and detail these kits. I've used a selection of these aftermarket accessories, on those I've already built (five so far), and would not wish to single out any particular manufacturer for special praise, any manufacturer choosing to produce Lightning odds & sods to be held in the same high esteem!

If push came to shove though, I would recommend as an absolute minimum Aeroclub's white metal nose ring (it adds



The F Mk 1A's nose assembly has been added...



... and the jet pipe assembly



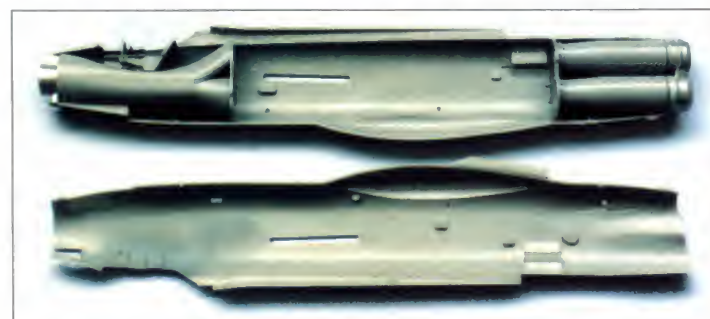
... as has the F Mk 2A's...



On to the wing - Oh dear Airfix!



KMC's resin cockpit once painted



Fuselage halves ready to be joined on the F Mk 1A



Plasticard tabs were used to aid alignment

nose, weight and looks lovely polished up). Other accessories will of course be down to personal choice, and available finances.

For the purposes of this article, I've described the construction of two variants. The F Mk 1A and the F Mk 2A. The T Mk 4 will be dealt with in Part 2 of this article. These use both of Airfix's kits, so the remarks made would be equally appropriate to the other marks included in the kits. As you will see I've relied heavily on the kit's decals, which are incredibly well printed, with excellent definition BUT with little glue on one of the sheets, more anon!

Construction

Construction commenced with the cockpit...

F Mk 1A

The kit's cockpit tub was used. Airfix supply minimal console detail with decals, so I used a combination of the decals



KMC's ejection seat ready for installation

provided and some careful painting. I painted the tub Medium Sea Grey (although it transpired afterwards that as an earlier variant it probably should have been black!). An aftermarket resin seat was used, with the addition of yellow/black striped fuse wire ejection seat firing handles.

F Mk 2A

I used KMC's really wonderful resin set. It's actually designed for an F Mk 6, and there were a few differences between the instrument panel used on this version and the earlier ones, but life's a little too short to worry about such items sometimes! Careful painting is rewarded here. Worthy

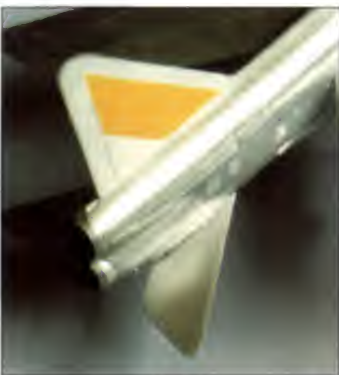


The F Mk 1A's wings ready for a little filler



KMC's resin cockpit tub added to the F Mk 2A

of special mention is KMC's depiction of the area behind the seat, which is often neglected. KMC state that a little trimming of the resin may be necessary. A little trimming, I removed tons of the stuff to get a decent fit!



White was used as an undercoat on the fin and spine of the F Mk 1A to give the yellow of the No. 111 Squadron fin markings greater definition

Fuselage

F Mk 1A

Straightforward enough. The cockpit tub was added to the right half, as was the jetpipe construction. This was made from no less than eight components, including afterburner detail. The intake assembly and trunking was also built up, and this includes some nice, if basic, internal nose-wheel well detail.

Airfix's instructions suggest that holes need to be opened to accommodate the fuselage cable ducting. Mine already had the holes there, which would need filling if the F Mk 1 was being built. A word of warning though, check where these holes are, especially if making the F Mk 3, otherwise you may end up with the ducting back to front! Aeroclub's metal nose ring was used, although mine was slightly oversized in width, and required a little trimming. The F Mk 1A's cannon ports are very poorly portrayed, being plain indentations in the plastic. These were omitted with the cannon troughs being replaced by plastic tubing, cut to roughly the correct shape and faired in with Milliput.

F Mk 2A

The F Mk 2A featured a cannonless belly tank. This is supplied in the kit, as is the



Airfix's representation of the cannon ports is very disappointing, so some amendments were necessary. Here the recessed plastic tabs have been removed...



... plastic tube has been added ...



... and Milliput used to fair it all in. Note Aeroclub's metal nose ring

F Mk 6's cannon version. Having made both I can confirm that neither are particularly good fits. I installed some extra bulkheads to strengthen and fill out the fuselage's 'girth' and this helped immensely, although I still had to use a little filler.



KMC's resin cockpit coaming on the F Mk 2A. Note that a little plasticard was required to replace the corner that I managed to snap off!



On to some serious painting



A 'sinister' coat of Dark Green added to the F Mk 2A

Wings

F Mk 1A

Each wing is made from no less than six parts comprising upper and lower halves and the leading edge again in upper and lower components with a two-piece flap. In my opinion this is a little over-engineered, but I would guess that Airfix used this method to accommodate the two different styles of wing. I am a little surprised at the flap arrangement as well as virtually ALL photographs of parked Lightnings I have seen feature these 'non-drooped', yet the kit offers the luxury of drooping them. Why the problem then, why not stick them flat I hear you say? Well, first of all the fit is a little sloppy at the corners and if you forget to put them in when the wings are stuck to the fuselage they're a devil to squeeze in! I would have preferred them moulded in one piece, but I suppose it's easier to close them, if open, than to open them if closed!

F Mk 2A

The leading edge of the 'kinked-wing' featured an under-camber, and when making this wing, great care is required. Again tabs were used. Small holes have to be opened if making the F Mk 6 with overwing tanks.

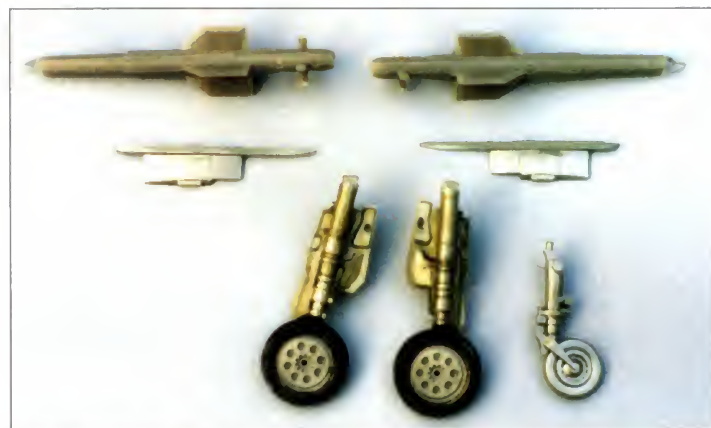
Both wings required a certain amount of coaxing to get into shape. The separate leading edge means that there is a lot of plastic that needs aligning and I would suggest that plasticard tabs are used:



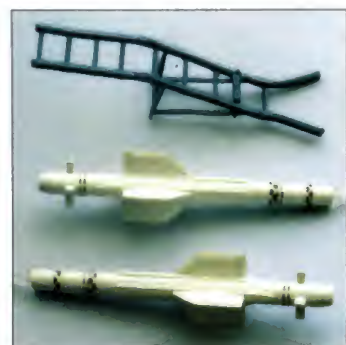
Once masked off, the black areas were added, followed by the natural metal (SnJ). Then it was time for the decals. I relied heavily on the kits offerings with parts from AeroMaster



Decalling has finished on the F Mk 1A, the aftermarket seat has been painted and added and now it is time to add the odds and ends



The undercarriage units being built along with the Firestreak missiles



The ladder and missiles ready for fitment



The PP Aeroparts white metal ladder (currently available from Flightpath)

you've been warned (although I've spoken to others who have built the wings with few or none of the problems I encountered)!)

The placement of the wings to the fuselage is ultra-critical to ensure they sit correctly. I had to pack the lower joint with thin plastic card, and even then my F Mk 6's wing (built previously) looks slightly different to my F Mk 2A's, and they should look the same!

Neither wing's wheel wells feature any real degree of detail, so this will need to be added if required. Eduard do a nice set of brass inlays which will be invaluable, although various piping will need to be added from plastic rod or fuse wire if required.

Other Airframe additions

Both kits feature the early 'round-tipped' and the later 'square-tipped' fins. These fit really well, but could do with the intake being opened up in the lower leading edge. The tailerons fit perfectly although care is required to ensure that they are at right angles to the fuselage. Various intakes and scoops need to be added, dependent on the mark being made and some were added here, although the smaller items were left off until after painting. The airbrakes are separate and these also required a little filler. There is the option to portray these open, but they were very seldom seen open when the aircraft was parked.

Undercarriage

Airfix's undercarriage units are finely detailed although the oleo links are a little too solid and the links are not handed. These can be replaced by plasticard or by

using any supplied as part of a brass sheet or white metal accessory set. The main unit's actuating strut is very sloppy in its fit, but it looks okay when added. Fuse wire and sprue was added to represent the brake pipes. The nose-wheel is made from three main parts and the wheel itself. All relevant doors are included, again with accurate looking detail. Airfix's mainwheels feature recessed tread pattern with detail on both inner and outer wheel hubs, again very well moulded, although the much earlier slotted wheels are not included (a case for some aftermarket examples please, to enable an earlier F Mk 1 or P.1B to be built!). The main legs are a little too straight and need to be 'raked' ever so slightly forward. Likewise the nose gear could do with extending slightly to get the correct 'sit'.

Stores

One of the Lightning's main problems was a lack of offensive stores. All marks could carry the Firestreak, although only the F Mk 3, T Mk 5 or F Mk 6 could carry the Red Top, but both are featured in the kit. The missile pylons are different for each missile and again Airfix have included both. A novel feature here is that the seeker heads are portrayed in clear plastic. To finish them off a comprehensive decal selection is included. Export versions did though have the luxury of being capable of having outer wing pylons added, which could tote Matra SNEB pods or bombs. Likewise a recce pod or rocket projectile pod could be carried in place of the missile pack. I daresay that some entrepreneurial soul will manufacture these in due course, to enable a Saudi or Kuwaiti F Mk 53 to be made. The over-wing ferry tanks weren't used on the F Mk 6 that I previously built, so I cannot comment on them. They look decent enough, and there's plenty of decals on the sheet to decorate them with!

The only other store included is the underwing refuelling probe and again the moulding is exceptional, although the separate lighting unit is supposed to be glued on the side rather than underneath, but again easily rectified.

Canopy

The windscreen fitted okay but lacked the rain dispersal duct at the front, although this was easily made from a rectangular piece of plasticard. The hood itself has some internal detail, but can be further enhanced by sprue or any of the brass detail sets. The hood is designed to be open - in fact I would think that some trimming may be required to portray it closed. Some people have criticised this as being too thick, and this is fair comment but it should be remembered that the real thing featured some very heavy framework. Aeroclub do feature a replacement vac-formed version for the single-seater though, which can be used if you don't fancy the kit's offering.

Nose-probe

I replaced my nose probes with sections of aluminium tube from old Contacta-type adhesive pots, with a needle to portray the forward pointed section. These were



Views of the finished F Mk 1A. Note Sqn Ldr Black climbing the ladder (actually the kit's pilot having received some plastic surgery)

superglued into the kit's plastic housing, after the plastic pitot was removed, and a hole drilled.

Painting & Decals

The Lightning of course had a very colourful career, one of its many endearing features. Early natural metal examples have a myriad of differing coloured spines and fins. Later in their careers upper surfaces received camouflage, Dark Green overall or Dark Green/Dark Sea Grey. These schemes in turn were toned down using various 'Air Superiority' greys.

My choices were:

F Mk 1A
XM184/A of No.111 Sqn. ca. 1963. In natural metal with black spine and fin with the yellow centre section. The Lightning flashes through the nose roundel came from the kit's decals as did all stencils and roundels. No.111 fin badge was taken from Cutting Edge's decal sheet,

which is supplied in black and red with a see-through element, the idea being that the fin is initially painted yellow and the whole black decal, including the leading and trailing edges applied. I decided that as I would need to mask off the black prior to the application of the natural metal, the removal of the masking would also remove the decals. I therefore painted the yellow segment (Humbrol gloss yellow with a touch of red to match the yellow in the decals) and masked this off prior to the addition of gloss black (Humbrol again). For the natural metal I used a mixture of Bare-Metal Foil™ oversprayed with SnJ. Expensive stuff, but surely the best metal 'paint' available. Various panels were buffed up with SnJ powder, with others darkened with a wash of dirty thinners.

As I mentioned earlier the decals are extremely well printed but some didn't want to stick! I had to use a fair amount of Johnson's Klear to ensure that they stayed put. Decalling took a couple of hours an evening, spread over a couple of evenings,



as the instruction booklet takes up three pages alone just on the stencilling!
F Mk 2A

XN738/P of No.19 Squadron ca. 1973. Dark Green over aluminium (both Xtracolor). The squadron markings were straight from the kit's decal sheet, with additional bits from the spares box. The kit decals adhered a little better this time, but once again took a couple of evenings to apply.

Views of the finished F Mk 2a



Detailing

I had the luxury of having a couple of white metal boarding ladders, which were nearly introduced by PP Aeroparts, one of which was re-painted and added to the F Mk 2A. I had planned to add a 'bone dome' to the windscreen to depict the aircraft on QRA, who knows by the time you read this I may have done it... The new ladder was built and added to the F Mk 1A with the pilot being butchered (literally!) from the kit. FOD covers were plasticard disks with fuse wire and red cotton thread detailing. Other additions such as antennae were added from the kit or from more fuse wire.

Summary

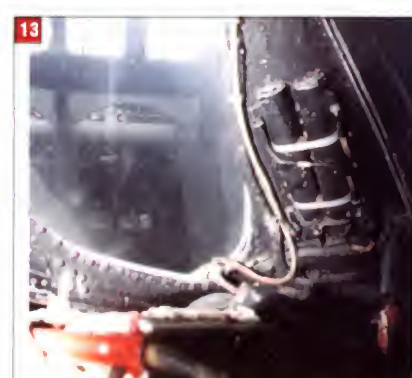
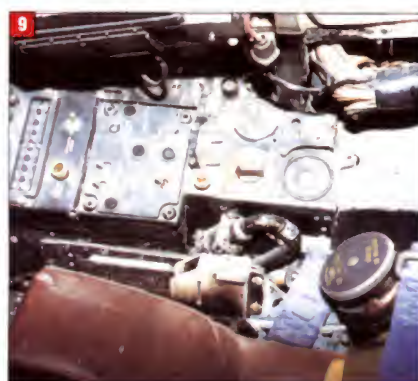
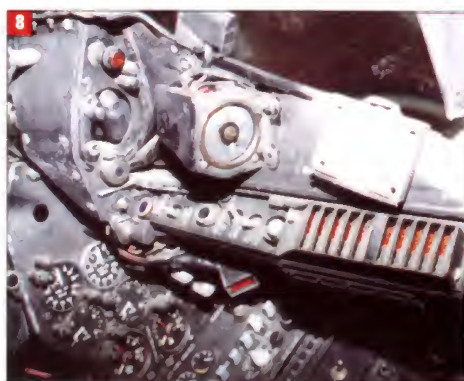
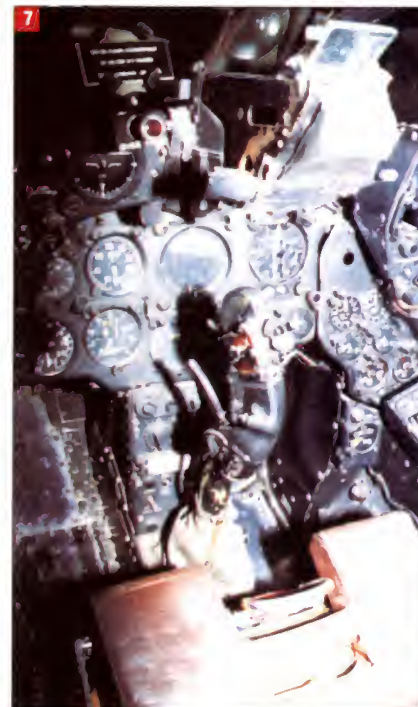
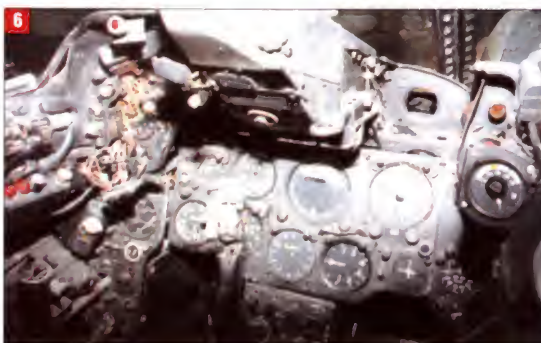
Obviously serious contenders for kit(s) of the year at the time, even though care has to be taken in certain areas, especially the wings. Hopefully the next batch manufactured won't suffer too much from warpage! Either direct from the box or with additional goodies, this kit LOOKS like a Lightning. If you haven't got one yet, get one or two. If you have one, build it, don't store it for a rainy day!

Bill Clark

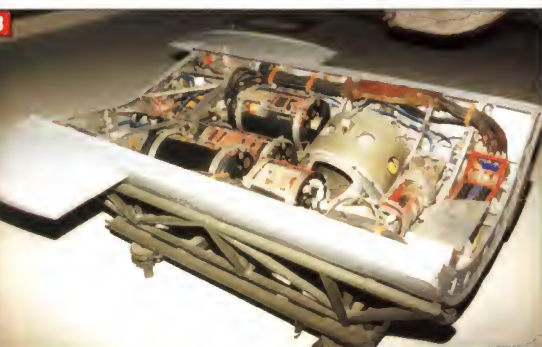
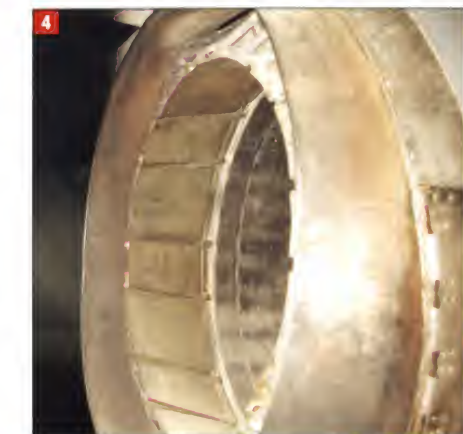
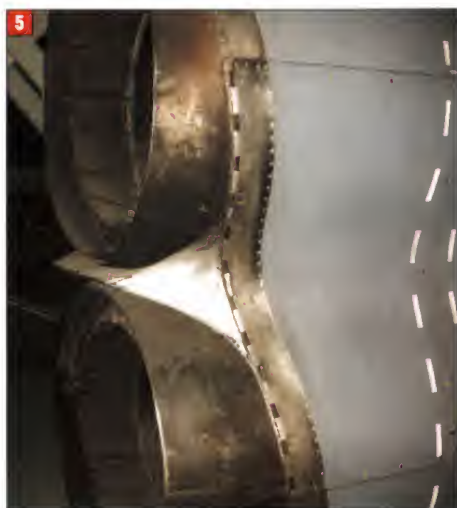
Part 2: Aeroclub's Lightning T Mk 4 conversion.

Photo Album: E.E. Lightning F Mk 1 XM135

by Mark Attrill



BAC Lightning F Mk 6 XS925



E.E. Lightning F Mk 1 XM135

Airframe

- 1 Close-up shot of the 'saw cut' notch on the leading edge of the mainplane which clearly shows the shape and position of the bridging plate
- 2 Twin communication aerials are mounted on the fuselage spine of single-seat Lightning variants. Note the colour and shape of the dielectric panel that the aerials are mounted on
- 3 Port view of the taller rounded fin which was a principle feature of early Lightning variants. XM135 carries the colourful markings of No. 74(F) Squadron as applied in the early 1960s
- 4 Port main undercarriage door. Note the shapes and angles to be found on the interior surfaces of the door

Cockpit

- 5 This photograph shows the upper central console area. The gunsight, mounted on a black frame with dark grey rubber padding, dominates the upper console. Note the style and position of the standby compass mounted on the cockpit frame
- 6-7 The central instrument panel was generally more complicated on the early Lightning variants. The primary Cockpit colour was black; later Lightning variants had Medium Sea Grey cockpits. The four instruments immediately below the central cockpit coaming were subsequently replaced by an airspeed strip display unique to the later Lightning variants. Note the Airpass AI 23 radar scope is missing from this particular aircraft; it would normally occupy the space to the right of the gunsight
- 8 This view shows the cockpit coaming on the port side of the cockpit. The six instruments in this view relate to the engine and fuel management information; always an important consideration with the Lightning!
- 9 Port console area, dominated by radio controls. Note the leather ejection seat cushion which is a dark red/brown colour
- 10 The starboard console area. The engine management controls and throttles dominate this area. The large instrument dial, top right hand side of the photograph, displays flying controls information. The yellow and black handle is for the emergency jettison of weapons or the fuel tank
- 11 View of the upper section of the Martin-Baker Type 4BS Mk 1 ejection seat
- 12 This view provides useful detail on the rear bulkhead area immediately behind the ejection seat. Note the actuating system for the cockpit canopy

- 13 Interior detail of the cockpit canopy on the single-seat Lightning F Mk 1. Note the two 'cylinders' on the central frame which are part of the canopy actuating system

BAC Lightning F Mk 6 XS925

Airframe

- 1 View showing the port ventral fin. These fins were peculiar to the F Mk 2A and F Mk 6 Lightning fitted with the larger ventral fuel tank
- 2 30mm Aden Cannon muzzle guard on the F Mk 6. The guard was normally dark red/brown in colour
- 3 Tail surfaces of the Lightning F Mk 6 XS925 preserved at the RAF Museum, Hendon. This particular aircraft carries No.11 Sqn markings typical of those found on the Lightning in the three greys low-visibility scheme of the late 1980s
- 4 Close up detail of the Rolls-Royce Avon 301R jetpipe on the Lightning F Mk 6
- 5 This photo shows the twin Rolls-Royce Avon 301R jetpipe arrangement
- 6 Close up of the Red Top missile mounted on the port side of a Lightning F Mk 6
- 7 Overwing fuel tanks were fitted to later variants of the Lightning to provide the aircraft with much needed additional range
- 8 This photograph provides useful internal detail of the detachable missile pack. Note the style of the missile pylons.
- 9 Starboard lower forward fuselage view showing the connection for the aircraft's oxygen system

1/72nd
SCALE



Kit-Bashing a Kingcobra

by Joel M. Hamm

In 1939, when the need was realised for high speed, high altitude interceptors to counter the Axis bombing threat, Bell responded with the P-39 Airacobra, an unorthodox, tricycle geared, engine-in-the-middle, cannon-in-the-nose, epitome of the art-deco image of a modern fighter. Pretty as it was, due to faults not entirely its own (the unavailability of a suitable engine, for one) as a fighter it utterly flopped above 17,000 feet. Relegated to limited ground-attack service in the Pacific theatre and North Africa campaign, it half-heartedly vindicated itself; but the majority were lend-leased to the Russians, who made of it a formidable 'Panzer piercer'.

"If it looks good it flies good" is one of those not-quite-truisms that has ensconced itself in aviation lore, if not in fact. Were it as valid for all airplanes as it was for the Spitfire and Mustang, the Bell Aircraft Company would have single-handedly won the air war. Instead, this heritage of Mr. Telephone and his Cape Breton based rival-to-the-Wright-Brothers Experimental Aeronautical Society spent the WWII years churning out visually appealing, innovative, but operationally insignificant aircraft. This losing streak lasted until 1947 when Maj. "Right Stuff" Chuck Yeager shattered the sound barrier in the .50 cal. shaped Bell X-1.

In 1942 Bell tried again with an improved version of the same basic configuration, from the mid-ship engine down to the automotive-style cockpit entry doors which made aircraft abandonment even more of an adventure than could

possibly be imagined. The Kingcobra shared its older brother's fate, as well as shape. With no designated Air Corps operational niches, most of the 3,300 production run were lend-leased to Russia and other allies. The few kept Stateside

were used in assorted experimental and training roles. The most notorious group was painted red and padded with extra armour to be used as manned gunnery targets. Sensors indicated strikes of frangible bullets by blinking wingtip lights (some accounts claim the nose spinner blinked like Rudolf the red-nosed reindeer, but this is doubtful). These RP-63Q's were dubbed 'Flying Pinballs' and represented an ignominious end to an exquisitely sculpted aircraft. While the degree to which the Kingcobra and Airacobra were different designs is a subject of debate among historical references, modellers consider both deserving of representation on the display shelf.

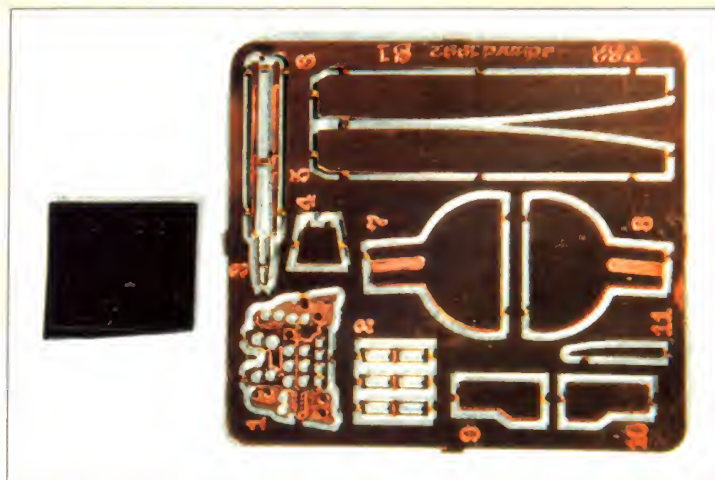




Aoshima's kit features useful details but builds into a disappointing replica



MPM tries hard for high technicality but needs help with moulding delicate parts



MPM provides photo-etched and acetate-film parts which are more trouble than they are worth in a kit this size



The radio deck needs shortening and reshaping

Cockpits in this scale are best kept simple. Sheet stock makes an adequate instrument panel



With no locating marks, inserting the cockpit tub can be tricky. A wheel well floor must be cut from sheet stock and it will take far more weight than that chunk of lead to keep the nose on the ground



MPM's fuselage (light grey) is a better starting point



The surgical plan was to cut away Aoshima's upper wing panels and use them and their ailerons to replace MPM's



The fuselage fits together with just minor gaps but the separate mouth on the engine scoop can be troublesome

In Kit Form

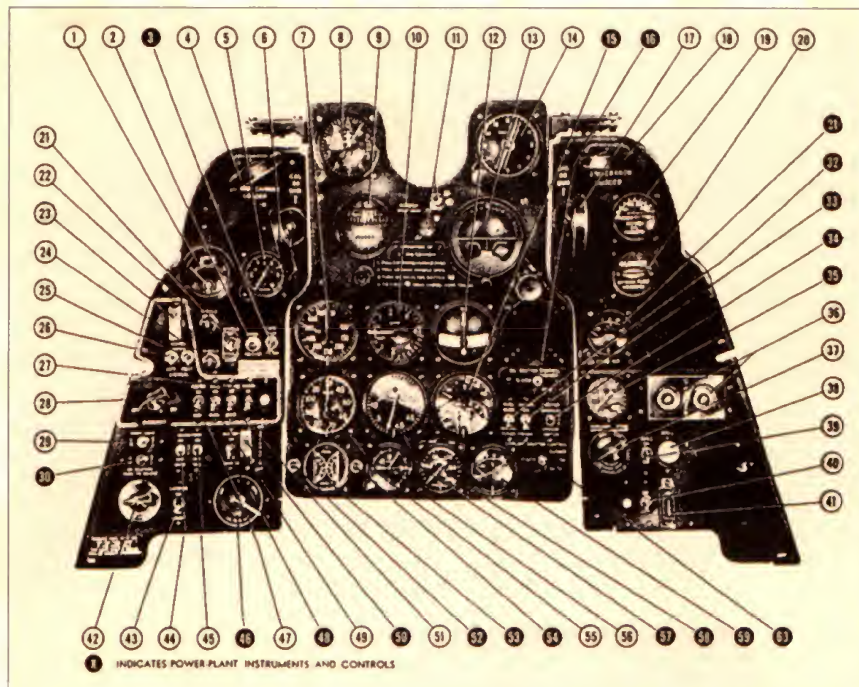
The P-39 Airacobra has long been available in several versions. Revell's 30 year old rendition still sets the standard for the mould-makers art, even sporting a removable panel to reveal the Allison V-12. Airfix did one about the same time, which departed so much from the airplane's true shape that it was not worth bothering with. Heller put out a nice P-39Q, and within this past year, Hasegawa issued their usual high quality, hi-tech, highly detailed, high-priced version. Until recently, however, the cause of the Kingcobra was taken up only by the Japanese Aoshima company, whose reasons for a poor reputation among modellers were well represented in this somewhat toy-like kit, which nevertheless has admirable saving graces. A while back, the Czech MPM Company (Modely Plastikovým Modelarum - "Models for Plastic Modellers"), which had been shoveling out rapid-fire releases of dream subjects such as the Grumman 'Fifi' (FF-1), Convair 'Pogo Stick', and Curtis Ascender seemingly came to the rescue. Unfortunately, haste and enthusiasm sometimes shoulder aside the meticulous moulding and engineering with which we have been spoiled. MPM made major efforts toward hi-tech and mixed-media(ism), but neglected in many respects their injection basics.

The Plan

The lack of a perfect Kingcobra seemed amenable to two solutions:

- 1. Wait until one of the major manufacturers saw fit to issue one of their typically sumptuous styrene creations, or...
- 2. Concatenate (kit-bash) the best bits and pieces of the available kits; an exercise carrying with it the opportunity to mess around with something more than basic out-of-the-box skills, with the possibility of bragging in one of the trade magazines at the recompense of a small measure of fame and presumably smaller fortune.

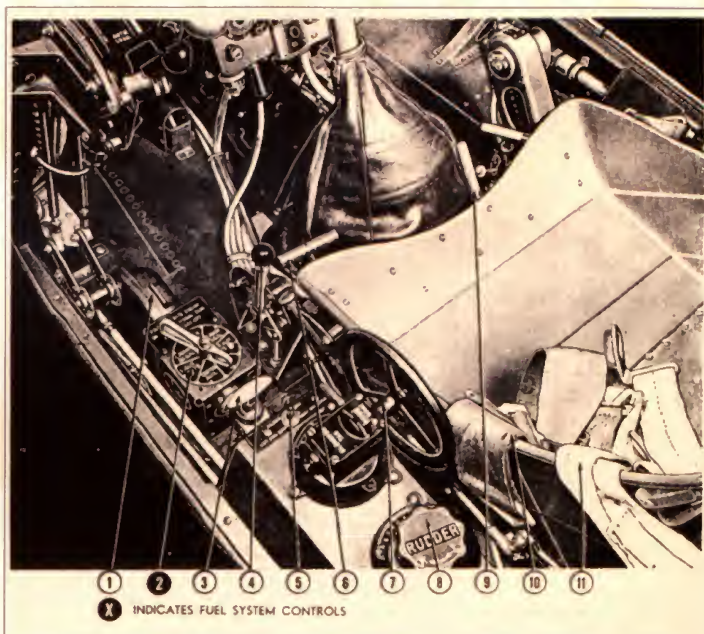
Any athletic, military, medical, or technical undertaking must be prorogued by a careful perusal of the playing field, formulation of a battle plan, and a healthy dose of flexibility. That step in turn depends on the accumulation of a sizable mound of photographs, diagrams, and technical references. Regarding a subject as esoteric as the P-63 Kingcobra, that pile mounted little in thickness above a few black and white photographs, diagrams, and short paragraphs gleaned from various books weighted toward the more



The main instrument panel of the P-63 (© US Official)

- | | | |
|---|--|------------------------------------|
| 1. Ammeter | 21. Landing Gear Switch | 41. SCR 695 Emergency Switch |
| 2. Landing Gear Warning Horn Release Switch | 22. Landing Gear Warning Light (Red) | 42. Fluorescent Light Rheostat |
| 3. Carburetor Filter Switch (P-63C-1) | 23. Wing Bombs or Tanks Salvo (Switch) | 43. Landing Light Switch |
| 4. Cannon Loading Handle | 24. Landing Gear Warning Light (Green) | 44. Wing Navigation Lights Switch |
| 5. Suction Gate | 25. Wing Bomb Arming Switch (Right) | 45. Tail Navigation Light Switch |
| 6. Fuseage Gun Charging Handle | 26. Wing Bomb Arming Light (Left) | 46. Ignition Switch |
| 7. Airspeed Indicator | 27. Cannon Switch | 47. Master Armament Switch |
| 8. Altimeter | 28. Gunsight Rheostat | 48. Battery Switch |
| 9. Turn Indicator | 29. Pilot Heater Switch | 49. Wing Guns Switch |
| 10. Rate of Climb Indicator | 30. Oil Dilution Switch | 50. Generator Switch |
| 11. Gunsight Spare Bulb Stowage | 31. Carburetor Air Temperature Gauge | 51. Fuselage Guns Switch |
| 12. Turn and Bank Indicator | 32. Booster Pumps Switch | 52. Fuel Low Level Warning Light |
| 13. Flight Indicator | 33. Engine Primer Switch | 53. Fuel Level Gauge |
| 14. Compass | 34. Starter Switch | 54. Fuel Low Level Warning Light |
| 15. Engine Gauge Unit | 35. Aux. Stage Supercharger Oil Pressure Gauge | 55. Manifold Pressure Gauge |
| 16. Oil Shutter Control Switch | 36. SCR 695 Radio Demolition Switches | 56. Clock |
| 17. Fuselage Gun Charging Handle | 37. Fluorescent Light Rheostat | 57. Tachometer |
| 18. Cannon Charging Handle | 38. SCR 695 SW0180 Switch | 58. Gear Box Oil Pressure Gauge |
| 19. Oxygen Cylinder Pressure Gage | 39. SCR 695 ON-OFF Switch | 59. Coolant Temperature Gauge |
| 20. Oxygen Flow Indicator | 40. SCR 695 IFF Switch | 60. Coolant Shutter Control Switch |

1. Control Lock
2. Fuel Selector Valve Control Handle
3. Defroster Control Handle
4. Centre Panel Bomb Armed and Safe Lever
5. Right-Hand Aileron Trim Tab Control Switch
6. Centre Panel Bomb Release Handle
7. Elevator Trim Tab Control
8. Rudder Trim Tab Control
9. Wing Bombs Manual Release Handles
10. Pilot's Safety Belt
11. Pilot's Shoulder Harness



The port side of the cockpit area (© US Official)

aggrandised members of the aircraft race. Fortunately for readers, during a recent Christmas visit to family members scattered throughout the Southwest US, the author was able to slip away unnoticed from all the in-law and out-laws, the sisters and cousins whom he reckons by the dozens, long enough to spend a day at the Pima Aviation Museum in Tucson Arizona. This private facility is loosely allied with the next-door Davis-Monthan Air Base 'Bone Yard' wherein are moth-balled acres of aircraft which the Air Force will doubtless never again use. That part of the tour was closed to the public, but among Pima's treasures was a pristine P-63. A bribe of Christmas goodies secured from the guard permission to



The fuselage joint also needed filling with putty



Cutting apart Aoshima's wing panels and re-contouring with strip stock proved to be a thankless and excessive task



MPM's wing parts did not fit together flawlessly either. A major roadblock was the radiator intake "spar" which did not match the required dihedral

clamber over, under, and around; snapping photos of wheel wells, cockpits, and engine bays. Unfortunately for the author, this excursion occurred after the subject model was completed, and several mostly minor construction errors were discovered - which will be duly noted.

The accompanying photographs of the two kits describes better than words the available starting resources. Plan A was to mate MPM's finely rendered fuselage with Aoshima's nicely textured and detailed flying surfaces. The reason was rivets - and this subject sparks acrimonious debate among modellers. One contingent contends that at viewing distance, an aircraft surface appears as blemishless as a baby's bottom and that fasteners as

depicted in 1/72nd scale would actually be the size of half a soccer ball, and therefore are an abomination to be obliterated with all available abrasives. At risk of offending any readers, it must be strongly suggested that these folks have never visited an airport, since such a field trip would reveal that while most subsonic aircraft have their leading edges and forward sections flush rivetted, the aft portions (those residing in 'turbulent flow') appear to have been produced by the Acme Boiler Plate Factory. Rivets are large (1/2"+), numerous, and prominent. Butt and lap joints of skin sections are conspicuous. Fabric sections, such as control surfaces, are readily differentiated from metal. (That same excursion will put to rest the

myth promulgated by purveyors of after-market undercarriage parts that aircraft wheels bulge like those on some cartoon jalopy - but that is another argument altogether).

Hands-on examination of Pima's P-63 confirmed that though the entire wing was flush rivetted, even a virginal layer of poly-urethane paint did nothing to hide the prominent dimpling. The ancient

Getting Started - The Fuselage

A first look at MPM's fuselage will reveal several 'incongruities' but these folks actually did their homework, so do not be hasty in making 'corrections'. The exhaust stacks appear to have twice as many pipes as required (especially when compared to only five per side on Aoshima's rendering). An Allison V-12 engine would suggest only



A simple notch and judicious putty solved that problem

Aristotelians, during a discussion of this very topic, coined a compromise - "De Gustibus Non Disputatum" (or something like that). 'There is no sense arguing matters of taste'. Some of us revere rivets and will undergo extremes for their preservation. Others are free to despise them and exert equal efforts to ensure their eradication.

six stubs per side, but photographs of the actual plane confirm that there were indeed twelve.

A well moulded vac-formed canopy is provided, along with two vac-formed doors. In order to build an open-cockpit version, both the canopy and doors moulded into the fuselage would have to be messily cut away. The actual P-63



Rivet detail is easily simulated with a pounce wheel and a straight edge; here a length of embossing tape



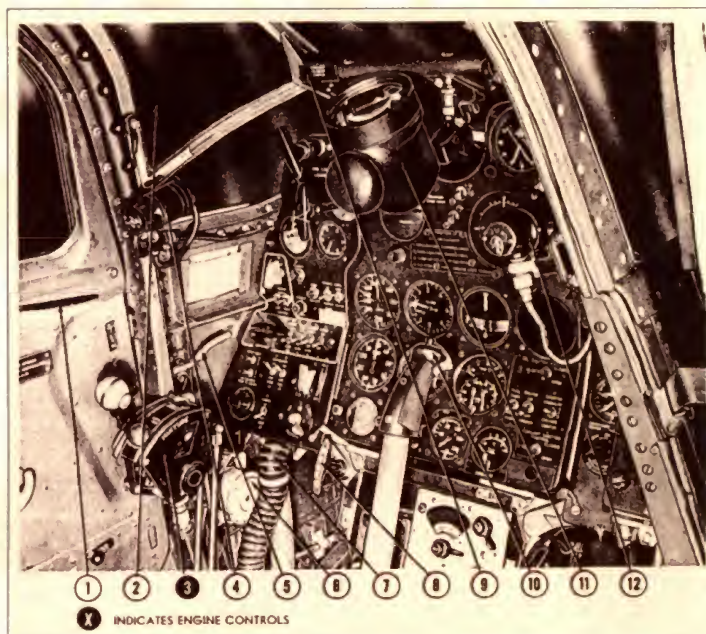
When swapping stabilisers, make sure the hinge gaps form a straight line. These didn't and had to come off for a few degrees of rearward sweep

business office was quite a cramped cubby-hole, and trying to represent it in 1/72nd scale would have created quite a clutter. For those reasons, a closed door configuration was the most prudent option. A photo-etched brass instrument panel is provided with a micro-filmed photographic backing plate accurately representing all the flight and engine instruments. Even if it could be made to fit into the cramped quarters (it couldn't) it would be invisible, so it was carefully preserved for use in another project and replaced with a simple piece of sheet stock with randomly drilled instrument holes. The kit seat was a shrunken nubbin, so I vac-formed a replacement for the sole purpose of practicing with a rudimentary vac-forming rig I had devised. (It works, but the optical quality of clear parts needs to be improved.). There is a nicely shaped control stick attached to the sprue, but its scale equivalent expands to the diameter of a California Redwood tree. Replace it if you wish with stretched sprue or rod stock, but it will be unnoticed with the canopy closed.

Positioning the completed cockpit tub is a problem because no locating pins or ridges are provided inside the fuselage. The arch-shaped bulkhead behind the seat should sit just aft of the embossed door seam. Getting the correct height takes some experimentation using the injected Aoshima canopy, which can then be discarded in favour of the vac-formed job. After inserting the tub (preferably before) it will be noted that the radio deck is fully 1/4" too long and doesn't fit the opening too well either. The best procedure is to cut away the radio box, shorten, reshape, and sand the deck into place (remembering to replace the radio box before canopy closure).

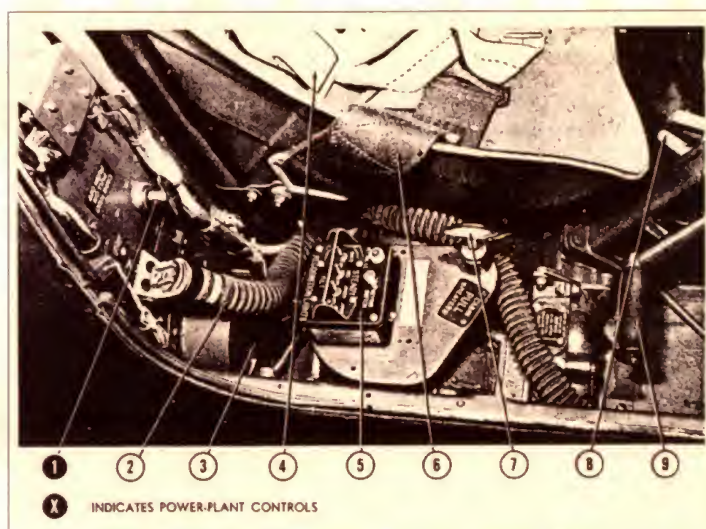
No nose-well tub is provided. The instructions provide a rough template for cutting a floor from sheet stock, but trial and error trimming will still be called for. Closing off the forward compartment causes another problem, by limiting the space available for weighting the nose. The P-63 takes a lot of weight up front to keep its tail off the ground. Because of its extreme density, depleted plutonium would be the material of choice, but its unavailability in even the best hobby shops mandates the cramming of plain old lead shot into every space forward of the main landing gear.

The fuselage halves go together neatly, but some advance planning must proceed seam smoothing. Drill a hole in the vertical fin leading edge, or make some other provision for anchoring the antenna wire. For the same reason, drill a small hole in the aft port fuselage where the antenna wire leads in. Anchoring can be done after painting, but it's far messier.



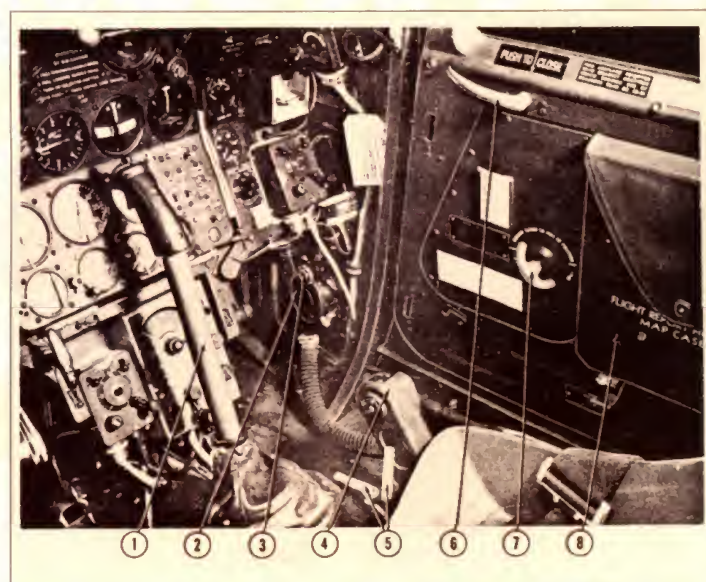
The forward area of the port side of the cockpit (© US Official)

1. Cabin Door Opening Handle
2. Clear Vision Windshield Panel
3. Engine Control Quadrant
4. Fluorescent Light
5. Emergency Door Release Lever
6. Landing Gear Warning Horn
7. Cabin Windshield Defroster Heater Tube
8. Parking Brake Handle
9. Gunsight Filament Switch
10. Control Stick
11. Gunsight
12. Fluorescent lamp



The aft starboard side of the cockpit (© US Official)

1. Carburetor Heat Control (P-63C-1)
2. Oxygen Mask Connector Tube
3. Cabin Heat Deflector Vanes
4. Pilot's Shoulder Harness
5. Recognition Lights Control Box
6. Pilot's Safety Belt
7. Cabin Heat Control Handle
8. Wing Bombs Manual Release Handles
9. Landing Gear Hand Crank



The forward section of the starboard side of the cockpit (© US Official)

1. Control stick
2. A-12 Oxygen Regulator
3. Oxygen Regulator Emergency Knob
4. Landing Gear Hand Crank
5. Wing Bombs Manual Release Handles
6. Cabin Door Opening Handles
7. Cabin Window Lowering Handle
8. Flight Report Holder and Map Case

The propeller spinner attaches to a nose plate that should at this time be glued to the fuselage so any gaps and irregularities can be fared. The mouth of the dorsal engine air scoop is provided as a separate part, which would add a realistic touch if it fitted better. An alternative to putty and sanding, which can ruin such a petite part, is contouring gaps and imperfections with layers of Testors Clear Part Cement, which



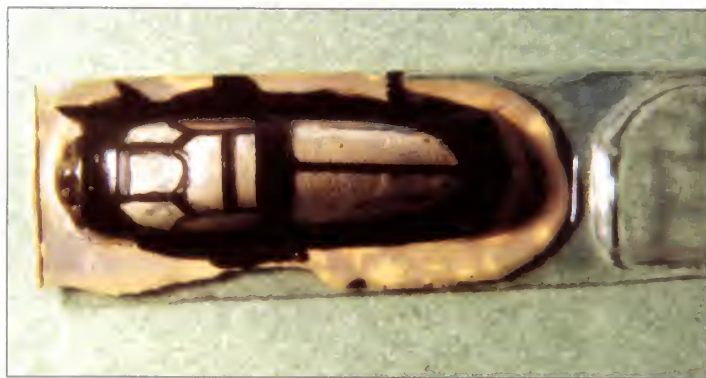
Aoshima's tail feathers (dark grey) win by a country mile, but need thinning of the trim tabs

fastener pattern need not be copied, and a swipe with 600 grit, then 1000 grit, wet abrasive, followed by a light buffing with plastic polish creates the perfect image of flush or raised rivets.

After masking interior cavities, previously painted Chromate Green, the whole was given a USAAF standard Olive Green over Neutral Grey scheme. Since these colours are not available in gloss or



Vac-formed canopies are best handled by filling with water-based wood putty. The bluish stuff is Microscale's masking compound which makes a nice release agent



A steady hand and a fine brush were the only way to paint the canopy frames

is water soluble until it hardens, and can be shaped with a brush. This can even be done post-painting.

The nose gear doors might as well get glued on at this point. The photo-etched brass pieces are too big, flat, and impossible to round into the compound contour of the nose section. Sculpting some from parts-bin scraps is easier (mine came from the nacelle doors of a Revell B-26). Another area in need of tweaking is the cockpit opening forward of the instrument panel. This area is intended to be covered by a panel molded into the vac-formed canopy. With careful trimming, filling, and filing, the fit can be made; but better results come from covering the opening with sheet stock and shaping with putty and sandpaper. Adding tail feathers completes the fuselage. Aoshima's are better than MPM's, but the elevator trim tabs need to be filed thinner. The attachment angles also need some adjustment. Ensure that the hinge lines form a perfect perpendicular with the fuselage.

Assembly - The Wings

Because the method of mating wings to fuselage varied on the two models, and because Aoshima moulded in unwanted gun pods and under-wing stores racks, the wing-swap plan was modified to cut away just the upper panels of Aoshima's kit and mate them to MPM's lower. More than slight differences in size and shape proved this to be more trouble than it was worth, and the entire transplant operation was



Neither prop was entirely acceptable. Aoshima's was fantasy shaped, MPM's multi-part hub was a chore, but it beats anything available in the parts bin

scrapped. MPM's stock parts did not fit together without 'persuasion' either. The major roadblock was the mid-wing radiator scoop mouth which formed a 'spar' that did not conform to the required dihedral. A simple notch cut-out and judicious putty applications cured the glitch. Putty was also needed at the wing to body joint. Aileron trim tabs of sheet stock or brass need to be cut and attached. The return to a featureless wing surface was disappointing, but at risk of offending the animal-rightist contingent, the proverb must be repeated that there is more than one way to skin a cat. Recessed rivet lines are easily embossed using a straight-edge and a ponce-wheel; a device consisting of a small cog rotating in a handle, which was invented for some unknown operation of dressmakers and tailors. The precise

semi-gloss, to avoid problems with decal silvering, I mixed my own, the approximation of published paint chips liberally tempered by the realisation that lighting and weathering result in a wide spectrum of allowable shades. Kit decals were touchy and had to be replaced from a Superscale sheet. A light overspray of Future acrylic floor wax thinned with Tamiya acrylic thinner (the stuff you can't buy anymore because it causes holes in the earth's ozone layer, or some such nonsense) sealed the insignia and added a realistic sheen.

Landing gear and assorted apertures completed the project. Aoshima's main and nose gear struts were far superior to MPM's, though the former needed approximately 1/8" additional length from rod stock to protrude the proper distance



Aoshima's main wheels resembled shirt collar buttons. MPM's split wheels were poorly moulded, but the spare parts box yielded up a pair that needed only minor reshaping. I could have sworn I shot a comparison of main and nose gear struts, but they were either devoured by the photo processerasaurus, or my brain is rotting from glue and paint fumes

from their new wing's wells. The retraction arm was cut away from the nose strut and replaced with thin plastic strips, which was far easier than trying to wrestle with the etched brass part. No locator holes are provided for any of the struts. Mainwheels presented a problem. Aoshima's resembled nothing so much as shirt collar buttons. MPM's were roughly molded in split halves, but the spare parts box yielded a pair that fit nicely, after being slightly lathed in thickness and diameter by chucking into a power-tool. The main gear doors were the only parts taken from the etched brass rack, but the Pima encounter with the real thing revealed a slight construction error. The small rectangular upper door fits inboard of the larger section, rather than in the more traditional arrangement.

Final Details

Aoshima's propeller looked nothing like the real thing. MPM's needed a good deal of refinement, but was still better than anything that popped out of the parts bin. The multi-part spinner took several hours of sculpting. Automotive 'spot-filling' primer does a nice job of filling gaps and sands away easily without damaging delicate adjacent parts. First impression of the propeller is that the blades are set too far forward on the spinner, but reference photos show that this is another of those 'mistakes' which should not be corrected. The box art shows a cannon protruding from the spinner. Most photos (which were of non-combat operational aircraft) lack this feature, but Pima Museum's real thing has a prominent pipe firmly bolted in place. As the French say: "Chacun à son goût" (Each to his own taste.)

Painting and cutting a vac-formed transparency is easy if it is first filled with



The large four-blade propeller of the P-63

water-based wood putty or patching plaster. A coating of Superscale's blue masking compound makes a good release agent. Repeated trial fittings and minuscule trimmings are to be preferred over the 'Measure twice, cut once' dictum we were all taught in high school carpentry shop. Any gaps and irregularities are hidden by Testor's Clear Parts cement. A pitot tube was formed from a snippet of stretched sprue and glued to its proper but odd location just forward of the left aileron.

Antenna wire of monofilament thread completes the job. References depict various arrangements. The box art is apparently not to be believed. Most diagrams show a single strand from the port side of the canopy arch stretching to an anchor abeam the upper rudder hinge. I cut the fine wire loop from a needle threading aid and inserted it into a hole drilled in the fin. A hole could have been drilled in the canopy arch but a neater



solution was to barely brush wet the spot with cyanoacrylate accelerator, tie a knot in the end of the thread, dip it in super glue gel, and when the two compounds meet they bond instantly. The same technique was used to secure the port side lead-in wire. Pima's example displayed a different arrangement. The side wire was lacking, but in addition to the left canopy-mid fin wire, another went from the right canopy side to an anchor at the fin tip. Such discrepancies are to be expected among variants of the same aircraft.

For a small and seemingly uncomplicated project, the P-63 Kingcobra consumed a disproportionate time and exertion. The opportunity to develop plastic surgery skills, and the appearance of the final product, of course made the effort worthwhile.

Joel M. Hamm



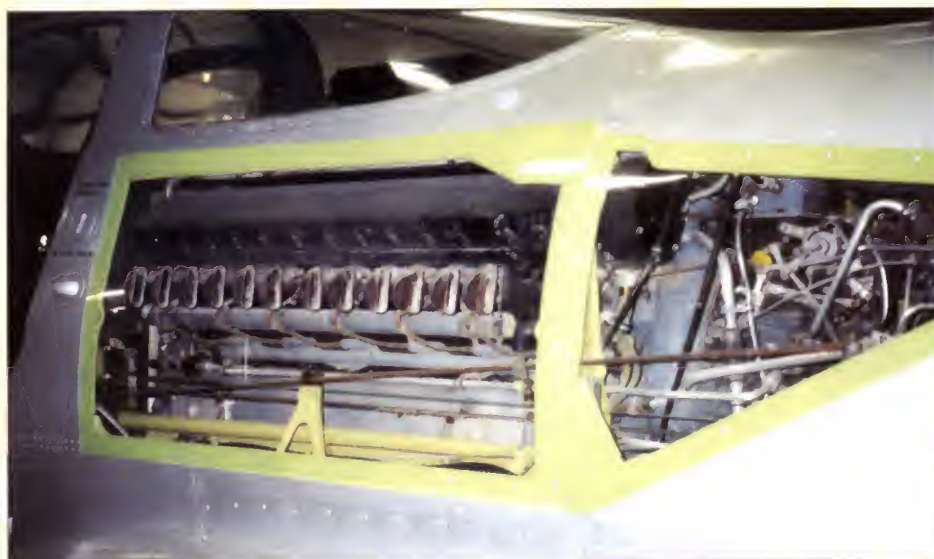
The port mainwheel viewed from the front



The port mainwheel viewed from the rear



An overall view of the P-63 at Pima



Detailed view of the Allison engine



The port side of the Pima P-63 has the engine cowlings removed and replaced with perspex examples

Kit-Bashing a Kingcobra

Messerschmitt Bf 109B/C/D Colour Schemes

Messerschmitt Bf 109B (V-4), 6-1, the first of its type to be flown in Spain by Hannes Trautloft. Note "Green Heart" emblem under the cockpit, absence of white wingtips and cross on wing roundels



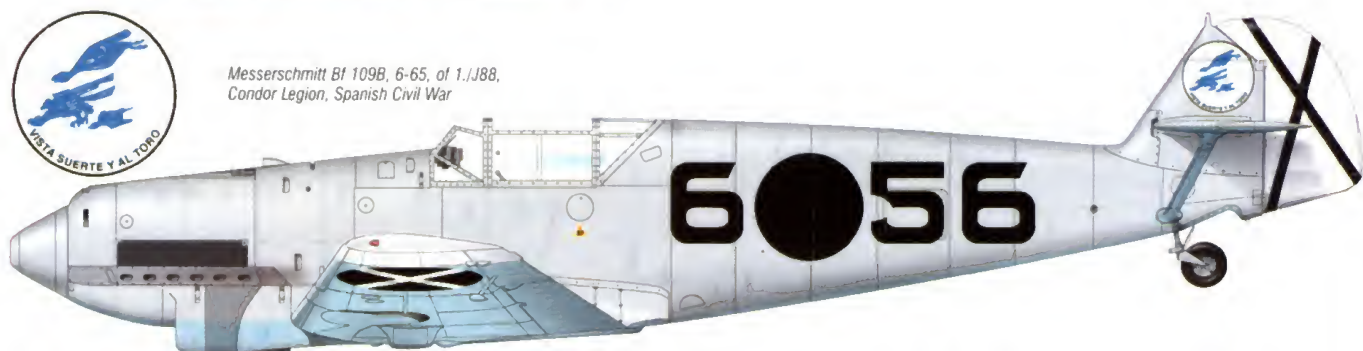
Messerschmitt Bf 109B-2, 6-51, of J88, Condor Legion, Spanish Civil War. Note five victory markings on fin



Messerschmitt Bf 109B flown by Gruppenkommandeur of J88, Hauptmann Gotthardt Handrick, Condor Legion, Spanish Civil War. Note the Olympic Games logos, carried one on either side of the spinner



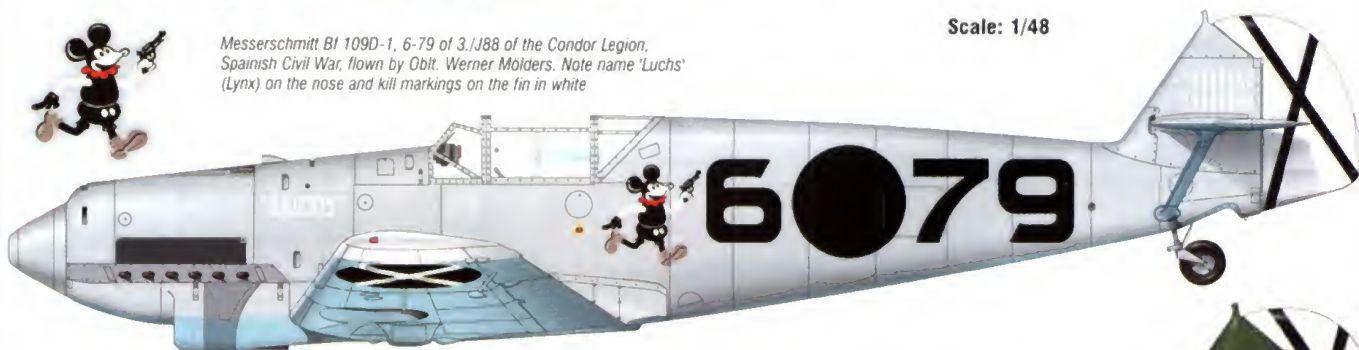
Messerschmitt Bf 109B, 6-65, of 1./J88, Condor Legion, Spanish Civil War



Scale: 1/48



Messerschmitt Bf 109D-1, 6-79 of 3./J88 of the Condor Legion, Spanish Civil War, flown by Oblt. Werner Molders. Note name 'Luchs' (Lynx) on the nose and kill markings on the fin in white



Messerschmitt Bf 109B-2, 6-29 of 2./J88, Condor Legion, Spanish Civil War, late 1937. The original grey upper scheme has been repainted in RLM70/71





The Spanish Civil War provided the perfect proving ground for Messerschmitt's new fighter, as seen here in service with J88 wearing Legion Condor markings (RJ Caruana Archives)

Birth of the Augsburg Eagle

Messerschmitt Bf 109

While the first Bf 108 – a small, two-seat single-engined monoplane – was performing its first flight in spring of 1934, Dipl. Ing. Willy Messerschmitt of *Bayerische Flugzeugwerke* (Bf) and his Chief Engineer, Ing. Walter Rethel were already studying a four-seat successor, an aircraft which was to shoot to fame as the Bf 109B *Taifun*. At the same time, a single-seat fighter development had been commissioned to them (some say reluctantly!) by *C-Amt* of the *Luftfahrtkommissariat*. The *Taifun*'s success at the *Challenge de Tourisme Internationale* confirmed Messerschmitt's conviction in a design which, though not revolutionary in any way, certainly embodied bold and aggressive features for its day. Notwithstanding the fact that no production orders had been guaranteed, the design team were determined to produce the very best fighter aircraft possible.

Mention of the Messerschmitt Bf 109 immediately brings to mind the Battle of Britain or one of the other major theatres of operations in which it operated throughout the war years. There are other obscure though interesting and highly colourful aspects of its history, and Richard J. Caruana has already touched upon use of the Bf 109 in Switzerland (SAMI Vol.3/1) and its post-war development as the Avia S.199 (SAMI Vol.2/11). This time he traces the birth and early development of the Augsburg Eagle together with its involvement in the Spanish Civil War where it received its baptism of fire.

Design of the new Bf 109 continued through the summer and autumn of 1934, retaining those features which made the Bf 108 such an enormous success. It was an all-metal, low-wing cantilever monoplane of stressed skin construction, with an oval-section fuselage and a single-spar wing which incorporated leading edge slats on the outboard section and slotted flaps. Its main undercarriage was

completely retractable and the pilot's cockpit was enclosed by a canopy which hinged to starboard. To satisfy the *Luftwaffenführungsstab* requirement, a pair of 7.9mm MG 17 machine guns were installed above the fuselage, forward of the cockpit, firing through the propeller arc. Choice of power-plant fell on the Junkers Jumo 210, with provision for the eventual installation of a Daimler-Benz DB.600. Before the end of that year metal had



been cut to produce the first prototype, which was ready for initial taxiing trials in August, 1935.

Early in September, Bf 109A (Werk.Nr. 758) bearing civil registration D-IABI took flight with "Bubi" Knötsch at the controls. As the Jumo 210 was ready for installation, a Rolls-Royce Kestrel V, 12-cylinder upright-V liquid-cooled engine of 695hp had to be installed and, after company trials at Augsburg-Haunstetten, it was ferried to Rechlin where it went through official tests at the hands of *Erprobungsstelle* pilots who looked apprehensively at its high wing loading. Knötsch's demonstration of Bf 109 Versuchs (V) 1 left an indelible impact, especially as it had clocked a top speed of 290mph – nearly 20mph higher than that of its immediate competitor, the He 112 V1 (SAMI Vol 3/11). However, preoccupations regarding the aircraft's difficult handling whilst on the ground, due to its narrow-track undercarriage, were not completely overcome.

Messerschmitt Bf 109B/C/D Colour Schemes



Messerschmitt Bf 109B, Yellow 7, of 6./JG132 based at Juterbog-Damm in October 1937. The background to the emblem is silver



Messerschmitt Bf 109D-1, S2+M53 of JFS1, Wernuechen, Spring 1939. S2+M58 further down is also from this school, though wearing slightly different markings



Above: Messerschmitt Bf 109D-1, White 2, reported as being in service with I./ZG.2 during the Polish Campaign, 1939. It, however, carries the marking of I./JG137 with which it operated during the summer of 1938 at Bernburg. RLM71 only on the upper surfaces



Below: Messerschmitt Bf 109B-2, White 2, of II./JG 2, bearing the rank markings of a Gruppen-Adjutanten on the fuselage. Shape of unit badge shield is the standard type, different from that illustrated at top of page



Scale: 1/48



Messerschmitt Bf 109B, Red 3 of an unidentified unit. The white marking under the cockpit shows a reindeer superimposed on a bow and arrow

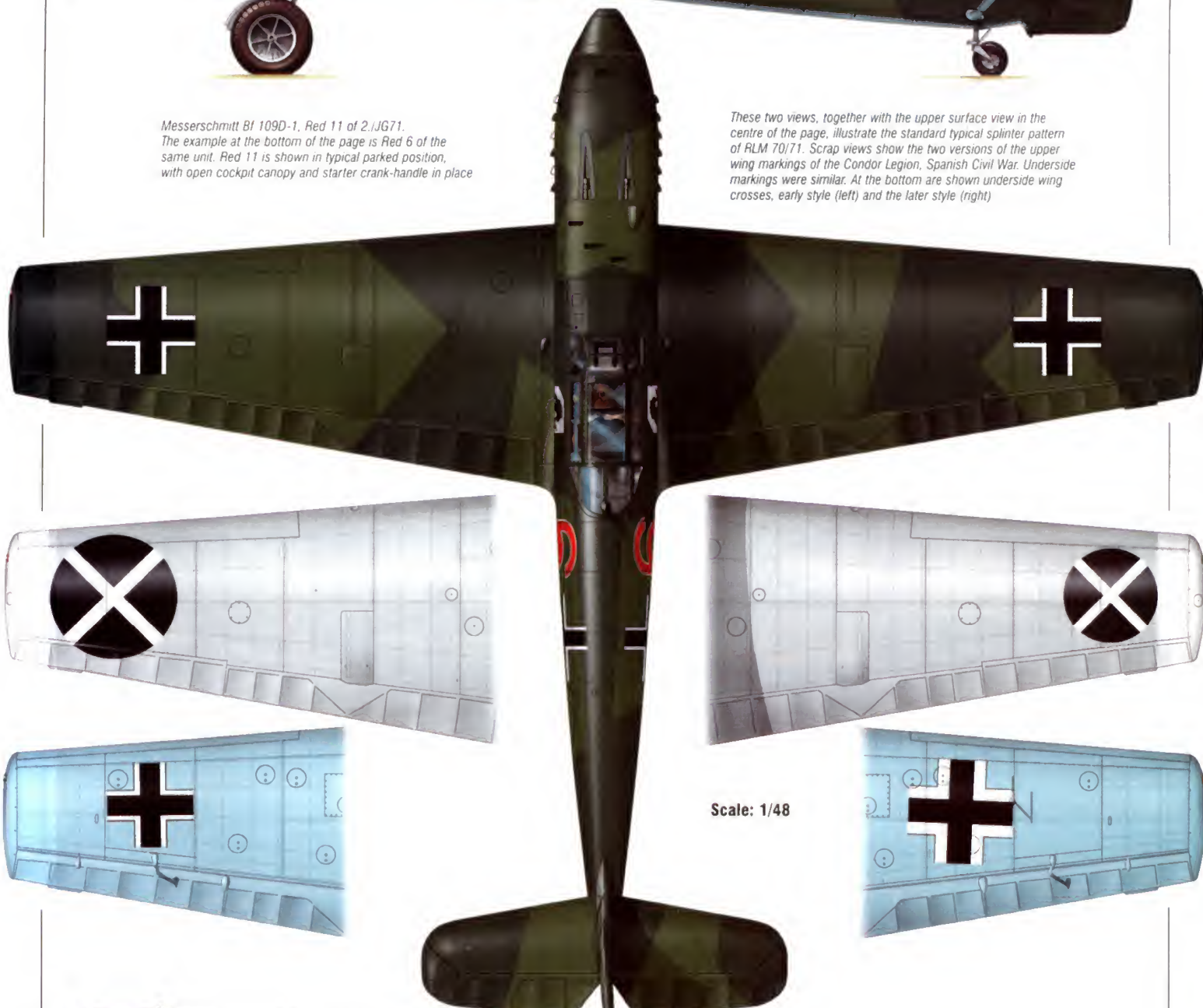


Messerschmitt Bf 109B/C/D Colour Schemes



Messerschmitt Bf 109D-1, Red 11 of 2./JG71.
The example at the bottom of the page is Red 6 of the
same unit. Red 11 is shown in typical parked position,
with open cockpit canopy and starter crank-handle in place

These two views, together with the upper surface view in the
centre of the page, illustrate the standard typical splinter pattern
of RLM 70/71. Scrap views show the two versions of the upper
wing markings of the Condor Legion, Spanish Civil War. Underside
markings were similar. At the bottom are shown underside wing
crosses, early style (left) and the later style (right)



Scale: 1/48



I'm grateful to John Haber for
providing much of the material for
the colour schemes in this feature

Messerschmitt Bf 109B/C/D Colour Schemes



Messerschmitt Bf 109D-1, ER-16, of Jagdfliegerschule 1, Werneuchen, 1940



Messerschmitt Bf 109C, N+9, of 10 (Nacht) /JG 77, based at Alsborg in July 1940. Upper surfaces are in RLM02/71



Messerschmitt Bf 109C N+8, July 1940, of the same unit as above, this time wearing the unit badge



Messerschmitt Bf 109D, GA+MK, of Flugzeugführerschule A/B 123 (Kroat), Agram, Zagreb, early 1943. 70/02 uppersurfaces with 76 undersides



Scale: 1/48

Messerschmitt Bf 109B-2, 73-79 (C4-79), one of the few survivors of its type in use with the Escuela de Caza (Fighter School) of the Spanish Air Force. Post-Civil War markings, including roundels in the standard six positions



Messerschmitt Bf 109B/C, J-307, delivered to the Swiss Air Force in December 1937. White cross in red roundel in four wing positions



Bf 109 V2 (D-IUDE) appeared in October 1935 fitted from the outset with the Jumo 210. Though provision for the installation of guns had been made, these were first fitted on Bf 109 V3 (D-IHNY). The former began flight trials in January 1936, while the latter had to wait till June to take to the air as delivery of its engine was delayed. The outstanding performance obtained by Messerschmitt's machine during trials at Travemünde could not be dismissed, and soon it began to earn ever-increasing favour in official circles. However, the edge between the Bf 109 and He 112 was still so slim that orders for ten pre-production machines of each aircraft were considered appropriate so as to establish the winner after further development.

Reports of the four-gun Hurricane and Spitfire provoked a revision of armament specifications, a third gun mounted between the engine's cylinder banks and firing through the spinner being introduced; 500 rounds per gun (rpg) had to be carried. It was also planned that the central gun would eventually be replaced by a 20mm cannon. Though the cannon armament was installed and tested, its recoil was considered excessive for the aircraft's structure at that point and, pending redesign, it had to be shelved. Modified with the third gun, the Bf 109 B-0 pre-production series (which continued to receive *Versuchs* numbers) began to appear, the V5, V6 and V7 being powered by the improved Jumo 210B.



Refuelling Bf 109D-1, Red 6, of 2./JG71 while two other personnel service the guns. Note the one-piece cover of the section just ahead of the fuselage with all its cooling slots (RJ Caruana Archives)

The Bf 109 Goes To Spain

By November 1936, the fighter element of the German-armed and manned *Legion Condor*, which had been committed to aid the Nationalist cause in the Spanish Civil War, was clearly outflown and outgunned.

Generalmajor Hugo Sperrle convinced Berlin that his He 51Bs were no match for the Soviet fighters which they were facing, and it had become imperative that Jagdgruppe 88 be injected with fresh



blood. Bf 109 V4 and V5 had only been briefly flight-tested at Augsburg before they were dismantled, crated and shipped together with V3 to Spain where they arrived at the beginning of December. The latter was damaged and was returned to Germany, while on December 14 *Leutnant* Hannes Trautloft, later to become commander of JG.54 *Grünherz*, performed the flight test of Bf 109 V4

marked with codes 6-1 and the famous 'Green Heart' emblem under the cockpit (see colour section).

Mechanical problems were encountered, and it was January 14, 1937 when the aircraft could at last be ferried to the front at Madrid for operational evaluation. After a few days all Messerschmitt fighters were returned to Augsburg and in March a contingent of 12 aircraft (plus four spares) arrived in Spain. After

assembly at Tablada they were passed on to form 2.*Staffel* of J88 under the command of *Staffelkapitän* 'Franz' Lützow, who by the end of April had

surprisingly coached his pilots through a relatively uneventful and quick conversion. The first batch of production Bf 109Bs were fitted with the Jumo 210Da which offered 680hp for take-off and was fitted with a two-speed

supercharger. A *Reflexvisier* IIIa reflector gunsight was included while the third (central)

gun was not installed on the examples delivered to J88; it had been discovered that due to inadequate ventilation this gun seized after firing a few rounds.

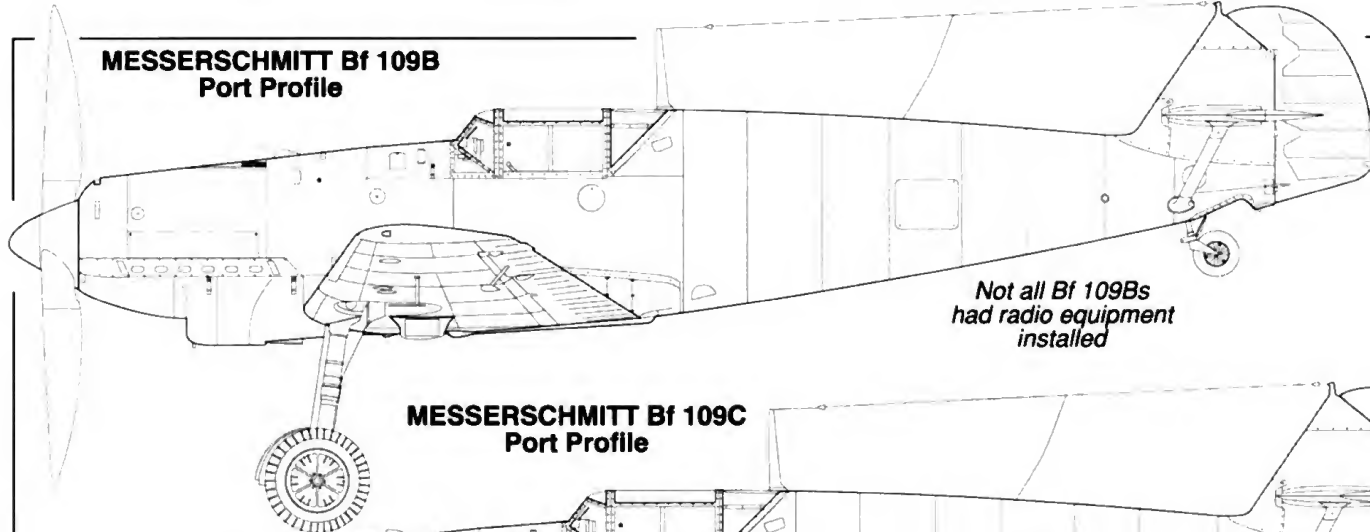
2./J88 did not participate in the Nationalist offensive in the north during June after which it joined the rest of J88 at Herrera de Pisuegra. This was a relaxed period until all units transferred to Avila on July 9 as Republican forces closed in. The Bf 109B pilots had by that time found themselves involved in a 'real' war, and on July 18 the Republicans launched a massive counter-offensive.

2./J88, assigned the task of facing the heavy enemy bomber attacks against Nationalist forces on the ground, registered a number of 'kills' in the process. At the end of July came a change in command when *Hpt* Gotthardt Handrick took over as



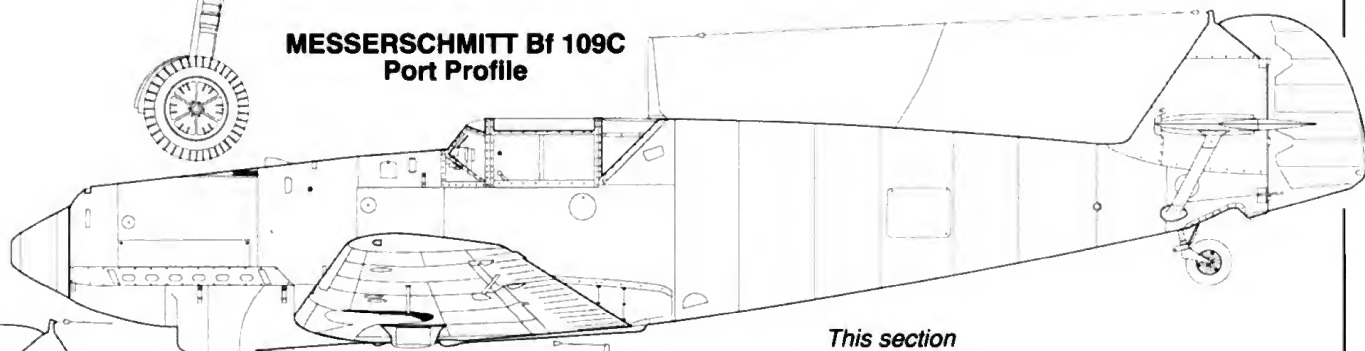
One of the second line units formed as a night fighter unit was 10 (Nacht)/JG77 based at Alsberg. N+9 in the foreground is equipped with Bf 109E-type exhaust stacks (RJ Caruana Archives)

MESSERSCHMITT Bf 109B
Port Profile



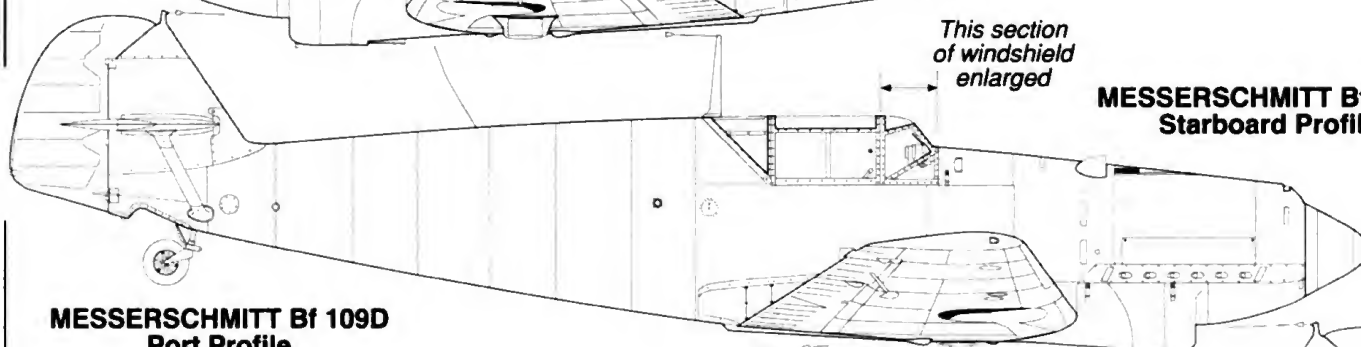
Not all Bf 109Bs
had radio equipment
installed

MESSERSCHMITT Bf 109C
Port Profile

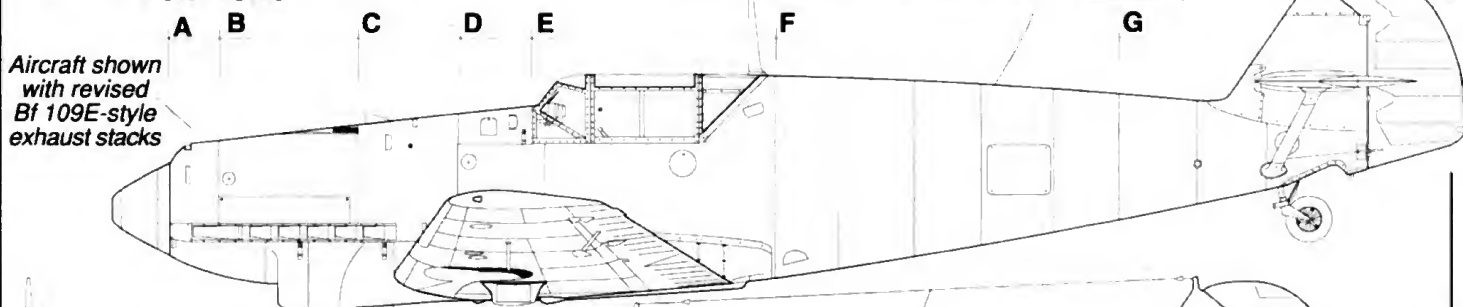


This section
of windshield
enlarged

MESSERSCHMITT Bf 109D
Starboard Profile

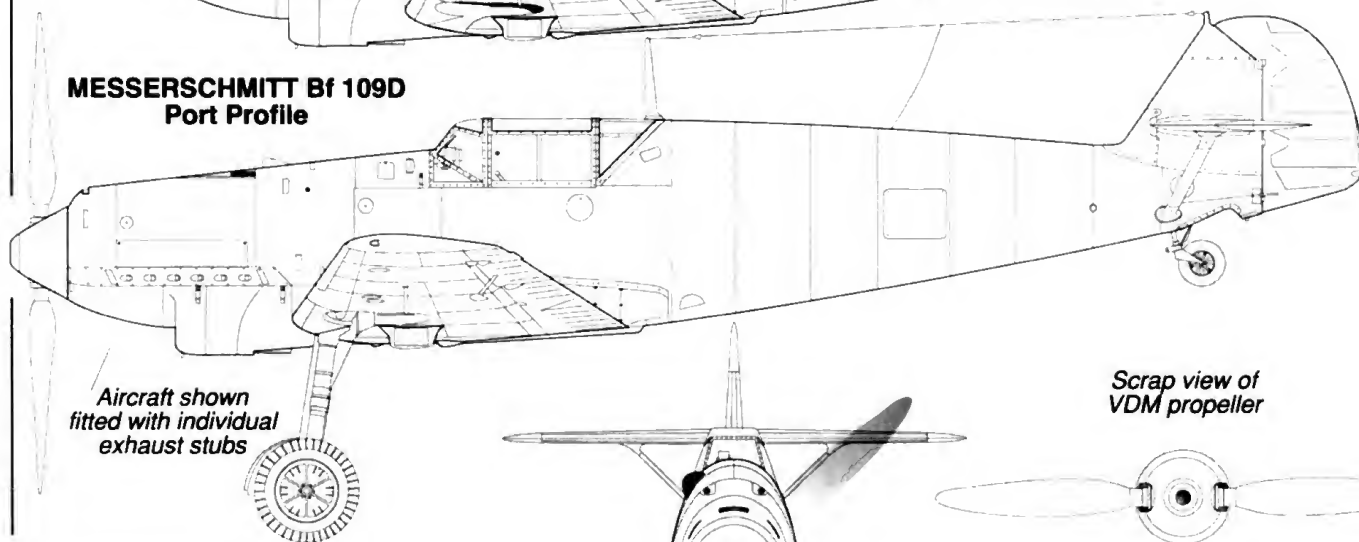


MESSERSCHMITT Bf 109D
Port Profile



Aircraft shown
with revised
Bf 109E-style
exhaust stacks

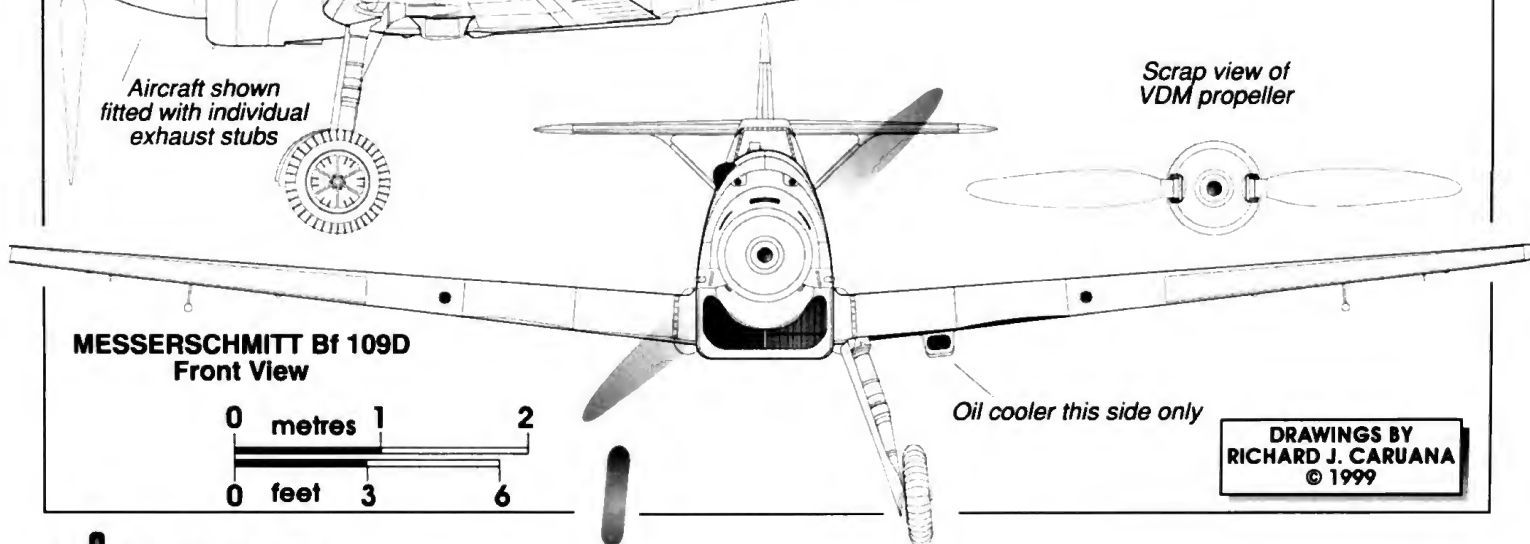
MESSERSCHMITT Bf 109D
Port Profile



Aircraft shown
fitted with individual
exhaust stubs

Scrap view of
VDM propeller

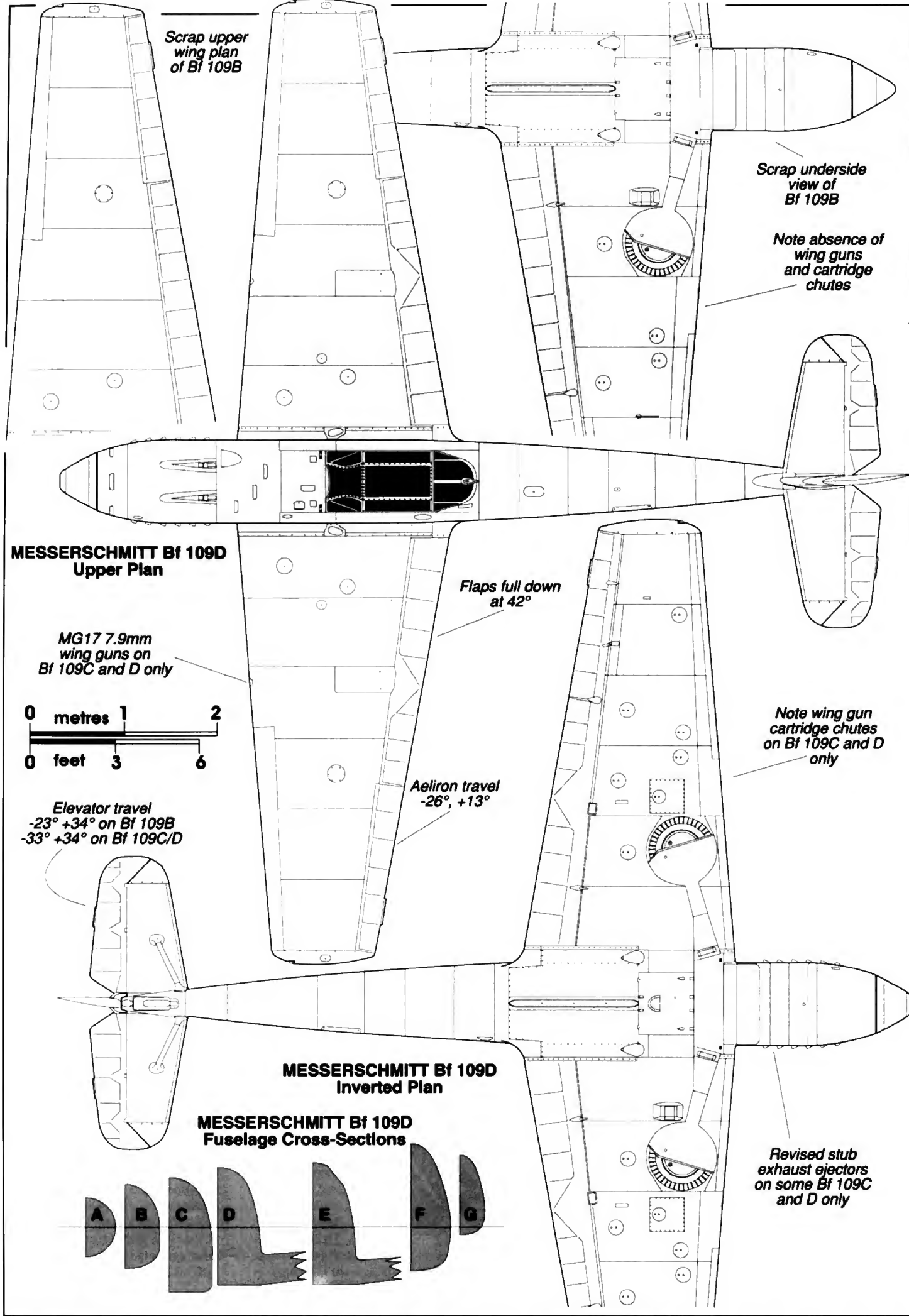
MESSERSCHMITT Bf 109D
Front View



Oil cooler this side only

0 metres 1 2
0 feet 3 6

DRAWINGS BY
RICHARD J. CARUANA
© 1999



Scrap upper wing plan of Bf 109B

Scrap underside view of Bf 109B

Note absence of wing guns and cartridge chutes

MESSerschmitt Bf 109D Upper Plan

MG17 7.9mm wing guns on Bf 109C and D only



Elevator travel
-23° +34° on Bf 109B
-33° +34° on Bf 109C/D

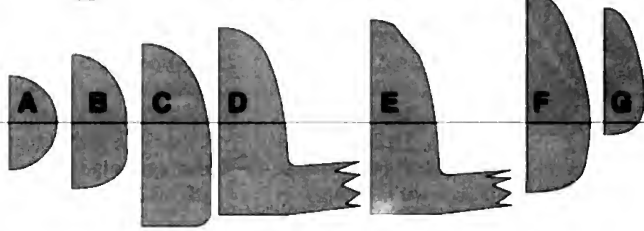
Flaps full down at 42°

Aileron travel -26°, +13°

Note wing gun cartridge chutes on Bf 109C and D only

MESSerschmitt Bf 109D Inverted Plan

MESSerschmitt Bf 109D Fuselage Cross-Sections

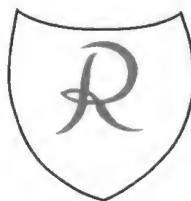


Revised stub exhaust ejectors on some Bf 109C and D only



The typical nose section of the Bf 109D-1 can be clearly seen on these examples of II/JG2 'Richtofen'. This version can be identified from the earlier 'B' from the gun ports in the wing leading edges (RU Caruana Archives)

Gruppenkommandeur. By the middle of August, Nationalist air forces had regained complete command of the air and the offensive resumed. During September, I./J88 began to relinquish its He 51Bs as the arrival of more Bf 109Bs enabled them to re-equip with the new fighter. Despite their small number the Bf 109Bs earned a remarkable reputation, and Messerschmitt's fighter was instrumental in the formation of those pilots who became legendary 'aces' during the major conflict that followed.



The Eagle Grows Its Talons

At around the same time there were three partially Bf 109B-equipped units in Germany, these being I and II Gruppen of JG132 'Richtofen' and I Gruppe of JG234 'Schlageter' while II/JG234 began to re-equip on the type in November, 1937. The final configuration of the Bf 109C emerged early in 1938 after a protracted series of modifications on Bf 109 V8 and V9. The first five examples of the 'C' reached Spain in April to form the nucleus of 3./J88 which reached full strength during July. The new model was powered by a Jumo 210Ga which featured fuel injection in place of the carburettor of the earlier engines, while more important was the increase in armament as a pair of guns with 420 rpg were installed in the wings. This coincided with the arrival of an improved version of the Bf 109's arch-enemy in Spanish skies, the Polikarpov I-16 Type 10 (SAMI

Vol3/4), which was similarly armed.

Conversion in Germany to the Bf 109C began with I/JG132 early in the summer of 1938 and on July 11 Bayerische Flugzeugwerke was renamed Messerschmitt A.G., no doubt to capitalise on Willy Messerschmitt's ever-growing international fame. By the time of the Austrian accession to the Reich in March 1938, the Luftwaffe had six Jagdgruppen, apart from J88 in Spain, flying the Bf 109. By September over 500 Bf 109s had been delivered from Messerschmitt and its licenced contractors which included Arado, Erla, Fieseler and Focke-Wulf, though the formation of service units was not keeping pace. The first overseas



procurement of the Bf 109 (except for J88's machines which were eventually relinquished to the newly-formed Spanish air force after the end of the civil war) came from Switzerland, when ten examples of mixed 'B' and 'C'

construction were delivered between January 10-19, 1939.

Although the V11, V12 and V13 pre-production machines had been built with the DB.600/601, bomber aircraft production was assigned the lion's share of Daimler-Benz engines, and until enough stocks of these engines could be allocated to fighter production, another interim Jumo-engine version became necessary. It had been intended to power the Bf 109D with

the DB.600Aa while the DB.601 engine was reserved for the Bf 109E. A small pre-production batch of the Daimler-Benz-engined Bf 109D had in fact been built, though most of these were given V-numbers and considered as prototypes for the later -E series. By 1938 Daimler-Benz had already begun phasing out production of the DB.600 in favour of the much improved -601, especially as the former engine was considered unsuitable for single-engined aircraft production having failed to attain the desired reliability.

This meant falling back on the Jumo 210Da, which meant that most of the Bf 109Ds built were virtually similar to the -B, with the exception that in their majority they had the wing-mounted guns of the -C. It can also be noted that a number of Bf 109Ds were fitted with ejector exhaust stacks similar to those on the Bf 109E. In the spring of 1938 the new version began to enter service, the first examples reaching I Gruppe des Jagdgeschwaders 131 based at Jesau, later redesignated I/JG130 during 1939.

Other units followed, though the use of the -D was restricted due to its limited production as major attention was switched to production of the Bf 109E.

The Bf 109D saw limited operational use during the new war in Europe, J.Gr.102 flying strafing sorties against targets of opportunity during the closing

days of the Polish campaign. A special unit, Staffel 10. (Nacht)/JG26, was formed during the summer of 1939 to evaluate and evolve night fighter tactics under the command of Obl Johannes Steinhoff, using a mix of Bf 109B/Cs while a second unit —

11.(Nacht)/JG2 — equipped with the Bf 109D was formed later that year. These units, both flying the Bf 109D, became IV/JG2 in February 1940 and were still using their old machines up to the end of summer of that year, when surviving examples were handed over to advanced flying schools and second line units.

The only other country to receive any of the early Bf 109s apart from Switzerland was Hungary, when three -Ds were consigned for evaluation purposes. A request for 40 examples of the Bf 109E from that country never materialised; it seems that Germany preferred to supply He 112s instead!

In the limited space available it has only been possible to outline the initial development of what was to eventually become one of the major fighting machines of the Second World War. There is no doubt that experience gained from combat evaluation during the Spanish Civil War provided Willy Messerschmitt with invaluable material on which to continue to mould his superb fighter. And this can clearly be seen in the pre-E versions of the Bf 109 which are unjustly neglected in both modelling circles and publications. The Augsburg Eagle was not 'born' during the Battle of Britain, and its early history deserves better appreciation.

Richard J. Caruana

Camouflage and Markings, Imperial Japanese Air Forces, 1937-1945

Part 3: Colour Notes, 1937-1942

Bear in mind...

When considering specific colour likenesses, it should be remembered that we have scant evidence of there having been, in Japan 1937-42, anything like the kind of aviation industry colour standards such as were to be found in Britain or the U.S.A. Consequently some variations of colour and tonal value were bound to have been accepted, provided they fell within the parameters of directives and guidelines applying at the time.

'China camouflage' colours. Hard evidence for these colours is effectively non-existent. The thoughtful pooling and comparing of colour information from many sources, old and new, offers the only chance of arriving at a usefully consensual result, and that was the process employed in the preparation of the matches given here for those particular colours.

This writer makes no claim to magical insights and wishes to caution readers that the colour matches made here must be treated as indicative. Colour File, and the Editor of Scale Aviation Modeller International would welcome any useful new information contributed by readers.

Note:

Readers making use of the following colour-matching notations are asked to note the following points:

- The first numbers of the FS notations, those indicating the degree of glossiness, have been omitted (e.g. "25109" becomes "*5109") as they would not always have corresponded to the glossiness, or lack of it, in the old colour being described.
- Pantone colour notations always refer to 'U' colours, not because all colours described here were consistently matt, but because the colour saturation of the 'C' colours is far too strong in most cases.
- A more accurate idea of the colour being described will always be gained if you have access to, and use concurrently, two or more of the colour matches given here.
- If any obvious inconsistencies in the colour notations contained in this article reveal typing or transcribing errors, please let us know so that Colour File can publish the correction promptly. We don't want gremlins misleading or confusing readers!

External Colours

Navy Grey

Altogether, the number and range of light greys called-up by various sources over the years has been nothing short of staggering, ranging from the coolest of off-whites through many graduations to something much darker and warmer. At one point in his writings, Ichiro Hasegawa recalled the new pale grey Zeros over China being described as "the new white fighter", and there have, in the past, been Japanese references to "light greyish white", and

would the Hinomaru, the black cowl, and all other coloured markings. And this fading and weathering is going to be most pronounced on those upper surfaces most exposed.

'Ame-iro'

The official identities of several JNAF camouflage colours are now believed to be known. According to an old 1942 document which came to light in fairly recent times, three greys were trialled: they were identified as J1, described as gloss grey, "almost caramel" (ame-iro); J2 described as blue-grey; and J3 simply described as grey. But as it has been reported, the text on another page of the document, identified J3 as the "ame-iro" grey then currently (i.e. Feb. 1942) being applied to navy aircraft. Clearly there must have been a typographical error in the translation or transcription of one or other of these pages...was the official identity of "ame-iro" J1, or J3? Anyway, we can leave that matter aside, for it seems clear that ame-iro grey was the grey introduced during 1941 for the overall finish to be applied to navy aircraft.

Regarding the actual colour of this finish, Japanese authority Shigeru Nohara has cited 'J3', and given FS.*6251 as an approximate match, remarking that in practice the protective clear varnish added as a sealing topcoat conferred a "somewhat brownish gloss tone". On the other hand, U.S. aviation

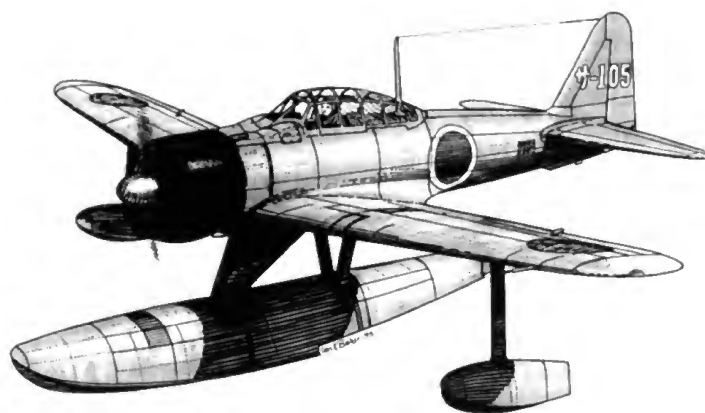
slate-grey-green, with quite a glossy surface finish, especially when the clear topcoat was added. But with some exposure to the elements the colour faded steadily lighter, to something more washed-out and matt, finally becoming a chalky grey-white with little discernible colour to it at all. No doubt it was various degrees of weathering and fading of the overall ame-iro finish, when subsequently observed on abandoned and crashed Japanese naval aircraft, that led to the widely-held belief that variations of quite pale grey, pale grey-green and grey-white were the original colour.

With general adoption of the new overall gloss grey (ame-iro) by the JNAF, D3A (VAL) carrier dive bombers also appeared in this finish. On the new B5N2 (KATE) carrier attack bombers, this overall finish was even more strongly coloured than that described above. We will continue to refer to 'grey' finishes, of which this was surely one, but there is evidence that it was a distinctly mustard-like shade. The colour showing on remains, as reported by Japanese c&m authority David Aiken, was apparently much like FS.*3440, which is very nearly as yellow as the old RAF desert camouflage colour Mid Stone, although somewhat darker in this case.

For the Pearl Harbour attack, KATE upper surfaces were given last-minute camouflage, as shall be described in Part 4. But it was the distinctive nature of this mustard-grey colour, still to be seen on all un-camouflaged surfaces, which led to the belief that some Japanese raiders had cheekily worn bright yellow. Not exactly bright yellow, in fact. But the belief in bright yellow lingered for years, kept alive by illustrators, even the late Richard Ward in the hallowed pages of Profile publications.

In summing up the 1942 navy grey picture, four points must be emphasised:

1. Due to overlooked evidence on hand, combined with the misleading appearance of weathered and worn finishes, an incorrect belief that the overall JNAF grey finish at that time was pale and neutral has long persisted, and in many quarters still persists to this day, constantly reinforced by the many illustrations, model paint colours, kit and decal instructions which have told us that this is so. However, it seems that there is now a significant body of evidence indicating that this was not so; that in fact the grey was decidedly darker and with a distinct strain of colour in it, albeit with a range of variations.
2. The jury is still out on the matter of the degree to which the colour content of the 'grey' was due to the addition of a clear sealing topcoat.
3. Sure, a pale grey-white model of a Zero, for example, is still valid provided that its overall appearance is one of a weathered and faded example. That means taking account of the gradation of fading that would have occurred, from the most exposed upper horizontal surfaces through to the least exposed (though grimed and stained) undersides, together with the effects of exposure on the other colours involved.
4. JNAF aircraft were very thoroughly painted at this time. Remember the red-



Nakajima Navy Type 2 Fighter Seaplane, short designation A6M2-N (Allied code name Rufe). Typical 1942-43 overall ame-iro grey with black cowl and unpainted spinner. White-outlined fuselage Hinomaru were characteristic of many Nakajima-built Rufe and 'Zero' aircraft. White tailcode identifies this example as no.5 with the Sasebo Air Group. Broad red propeller warning band on upper surface of float; two narrow red bands on float sides for positioning a beaching trestle; wing gun access covers outlined in red.

everyone has been happy to simply go along with this. Bothersome references to other darker shades have tended largely to be ignored.

But now every indication points to the full range of greys, from the rather darker, warmer shades to the lightest, chalkiest off-whites, all being "right", in a sense. How come? Here is the explanation. The new grey settled upon for the A6M Zeros, and for other navy aircraft, was appreciably darker and glossier when fresh than most of us have been led to believe over the years. But it had a propensity for fading, particularly when exposed to the harsh conditions of the Pacific theatre. The important message here for modellers is to remember that not only would the increasingly matt grey of a worn and weathered aircraft be showing the effects of exposure and fading, but so too

history researcher James F. Lansdale has made an extensive and close study of the exterior paint colours on numerous preserved ZERO and RUFÉ parts and components in museums and private collections. His published report (Asahi Journal Vol.2 Nos. 3 and 4) indicated a range of grey-greens and grey-browns, but found limited evidence of the varnish topcoat, so seeming to disagree with Nohara's advice on this point.

The Lansdale study pointed to that grey, the one described as "ame-iro", the one applied to A6Ms and other navy aircraft, being a warmly coloured one whether or not it was varnished. The varnish presumably simply deepened and altered the colour a little further.

As reported, the colour ranged through medium-light shades of grey-olive-brown to

brown primer which lay beneath the grey topcoat. Abrasion and rubbing of surfaces permitted the primer colour to start showing through, particularly with some fading and chalking of the topcoat. Only after an excessive amount of this, or in a case of outright damage, would metal show.

A wartime USAAF report concerning Japanese aircraft camouflage recorded "The... 'Aleutian' Zero plane... is described as glossy greenish gray...", "Zeros...at Moresby...were completely white except for their national markings". The paint finish of the A6M recovered intact by the USN in the Aleutians was in good, un-weathered condition. By comparison, the examples sighted over Port Moresby had faded under the tropical sun to such an extent that they appeared "completely white".

The colours indicated below are based upon the Lansdale researches.

Ame-iro grey

Mitsubishi-built A6M (Zeke or 'Zero'):

Ame-iro was a glossy light olive-grey or grey-green or ash-green. Actual samples studied fell into the following range:

- FS: *4257 - *4255 - *4201 - *6350 - *0277.
- Methuen: 1E6 - 3E5 - 4E4 - between 4D3 & 4E4 - 5D4.
- Pantone: between 5825U & 5835U - 4495U - 451U - browner than 4505U.
- BS.: 389 Camouflage beige sits in this bracket, with other variants being greener.
- This paint faded to a "dove grey colour" or a "flat pale gull grey" in the range:
- FS: *6357 to *6495
- Methuen: 4D2 to B-C1.
- Pantone: 415U with touch more beige, to 427U.
- BS.: like 389 Camouflage beige only much lighter, to very pale grey (no match).

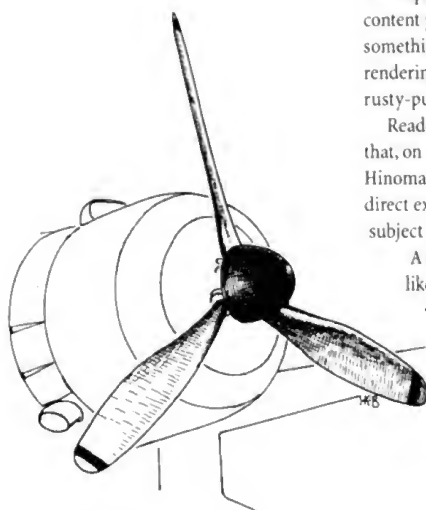
Nakajima-built A6M (Zeke or 'Zero'):

Ame-iro was a glossy light grey-green.

Actual samples fell into the following range:

- FS: *4201 - *6350 - *0277
- Methuen: 4E4 - between 4D3 & 4E4 - 5D5.
- Pantone: 4495U - 451U - browner than 4505U.
- BS.: 389 Camouflage beige sits in this bracket.

This colour faded to a chalky grey



Army propeller, 1942: spinner frequently coloured or standard light grey-green, front faces of blades unpainted, red tip bands, black anti-glare rear faces.

similar to:

- FS: *6492.
- Methuen: C1
- Pantone: 428U.
- BS.: a little lighter than 627 Light aircraft grey.

Note 1: There is some evidence suggesting that sometimes fabric-covered control surfaces of Nakajima-built Zeros were not given the grey-green ame-iro but remained in grey dope, around:

- FS: *6314 - *6251
- Methuen: 27D-E2 - slightly lighter than 21E2.
- Pantone: slightly darker than 443U - 423U.
- BS.: approx.694 Dove grey - approx.637 Medium sea grey.

Note 2: Currently, it seems the ame-iro grey applied to D3A (VAL) aircraft showed similar colour characteristics to those described above.

Nakajima B5N (Kate) aircraft:

Actual samples reportedly matched by:

- FS: *3440
- Methuen 5D6 is close.
- Pantone: 125U, but slightly greyer.
- BS.: as dark as 389 Camouflage beige but much more yellow.

The 'brassy/brown' clear finish

The editors of the Japanese Model Art series of publications have proposed, via a colour chip, that the colour effect was not so much golden as sitting between copper and brass.

You would have to imagine either unpainted metal or aluminium-painted surfaces coated with a glossy clear finish which imparted this kind of coloration, in a translucent way, to the surface:

- FS.: *3448/*0266
- Methuen: 5C4/5D5
- Pantone: 465C
- BS.: 351 Light stone.

Red

A few years back there was some debate about whether or not the red of the Hinomaru had been a bright one or not. All indications are that it was... but not possessing the kind of intensity or brilliance obtainable from modern pigments and paint chemistry, of course. Moreover, time and exposure of the Japanese high cellulose content paint would appear to have caused something of a change, eventually rendering the red somewhat more dull: a rusty-purplish kind of red.

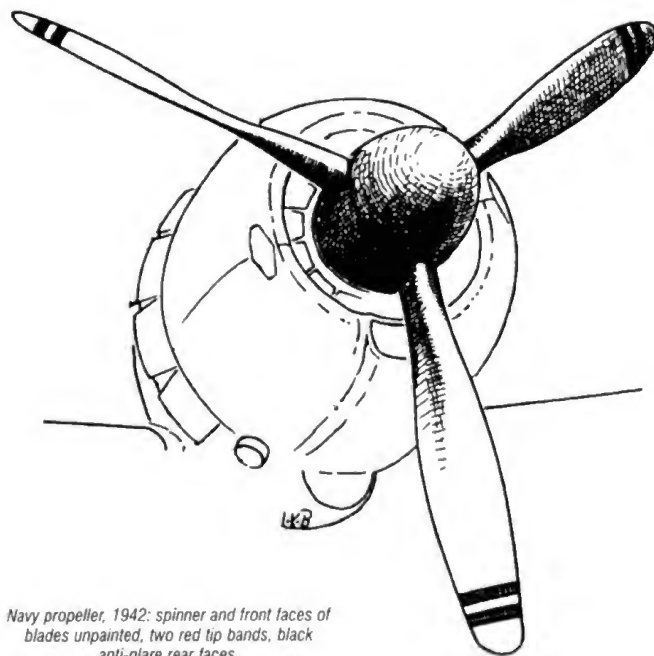
Readers should note there is evidence that, on wing undersides where the Hinomaru red was protected from constant direct exposure to the elements, it was not subject to anything like the same change.

A typical Hinomaru red might be likened to:

- FS: *1140 or *1136
- Methuen: 10D8
- Pantone: 200U
- BS.: 539 Currant red or 538 Cherry.

Army light grey-green

This colour can be said to have been more than a little like the RAF colour 'Sky', being a fairly light grey-green colour, although there is reason to believe that the JAAF colour



Navy propeller, 1942: spinner and front faces of blades unpainted, two red tip bands, black anti-glare rear faces.

could perhaps have been just a shade darker and perhaps a little greyer.

Anyway, allowing for possible variations, the standard army light grey-green, which continued on a great many aircraft throughout the war years, was most likely something like:

- FS: *4424
- Methuen: 30D3
- Pantone: 5773U or 5783U
- BS: 210 Sky

Camouflage Greens, Navy & Army

From the welter of opinions on the subject of greens in earlier use by both army and navy, one may safely conclude only one thing, it seems: that a dark green and a dark olive green were both in use. One earlier Japanese source (1964) stated that these were mixed from two basic colours, "sea green" and "olive drab", the proportions of each determining the final colour. If this were true, it would at least go a long way toward providing an explanation for the very considerable range of green variations researchers would seem to have been able to turn up over the years!

Dark Green

- FS: between *4092 and *4062
- Methuen: between 26F4 and 26F8
- Pantone: between 350U and 3435U
- BS: between 226 Middle Brunswick green and something a little less chromatically intense.

Dark Olive Green

- FS: *4096 or *4102
- Methuen: 30F5 or 1F4
- Pantone: 5743U
- BS: 641 dark green

While most sources have agreed there was some kind of 'medium green' camouflage colour used by the army and perhaps occasionally by the navy, ideas about what that colour might have been like produces diverse, but rather inconclusive, results. A middling-light olive green seems like a relatively safe possibility. However, it could have tended more toward a mid-toned grey-green.

Army Medium Green of an olive kind could have been like:

- FS: *4098
- Methuen: 2F7
- Pantone: 581U
- BS: no match
- ... or if a grey-green:
- FS: *4128
- Methuen: 28F5
- Pantone: between 5747U and 5757U
- BS: 283 Aircraft grey green is a little lighter than the others above, but the right colour.

Camouflage Browns, Navy & Army

A very dark brown was one of the several China theatre camouflage colours believed to have been used by both army and navy. Although sources differ about what this brown was like, it is interesting to note that opinions also fall into two groups. One group points to variations of a very dark chocolate or black-brown. The other group of suggestions indicate a colour much more purplish-reddish, moving toward a dark brown-maroon. Two different browns from two different paint makers?

Typical of the chocolate/black-brown:

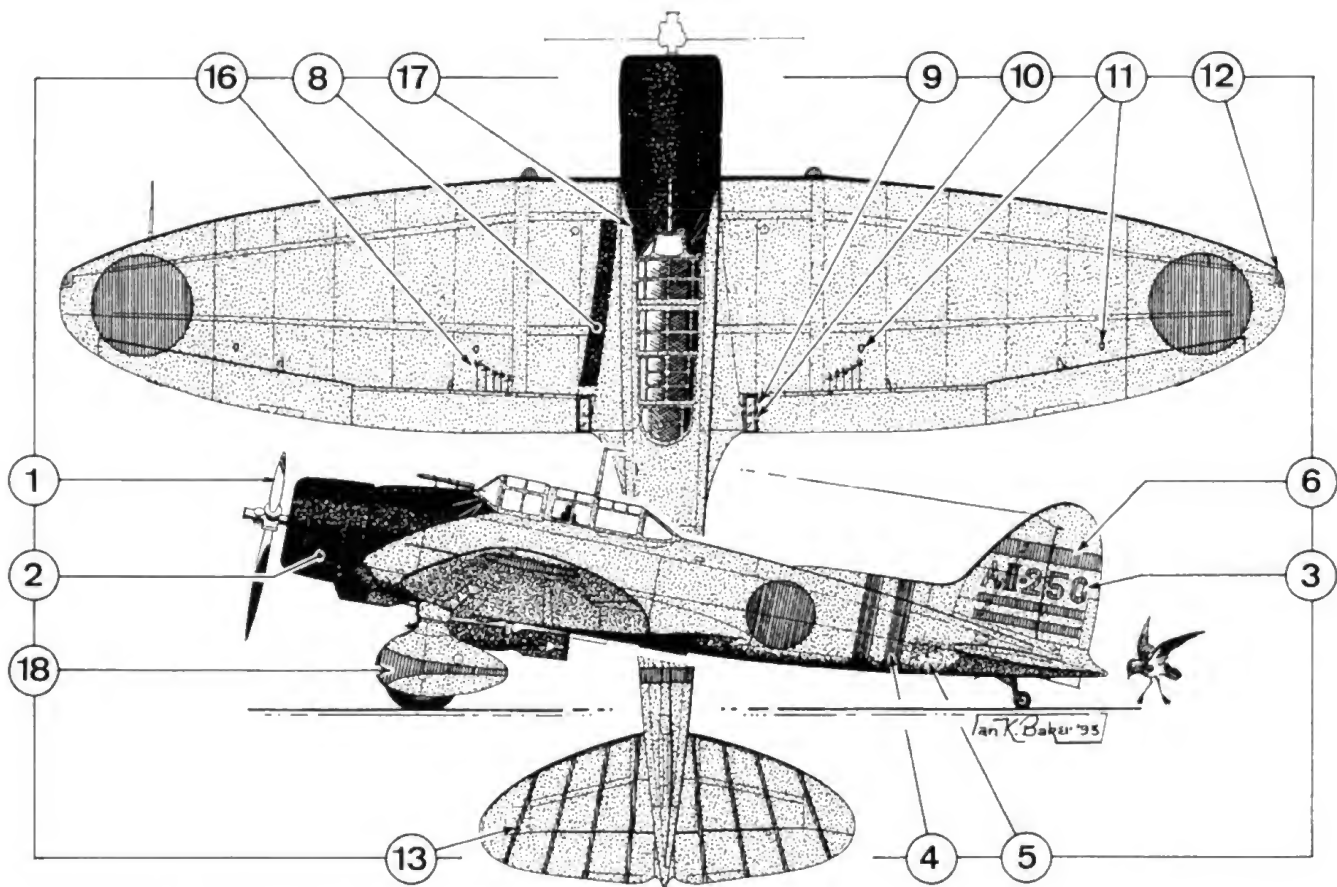
- FS: *0080 or *0040
- Methuen: 6F7 or 6F4
- Pantone: 469U or between 412U and 497U
- BS: like 499 Service brown but not so dark, or 436M Dark camouflage brown.

Typical of the reddish-maroon brown:

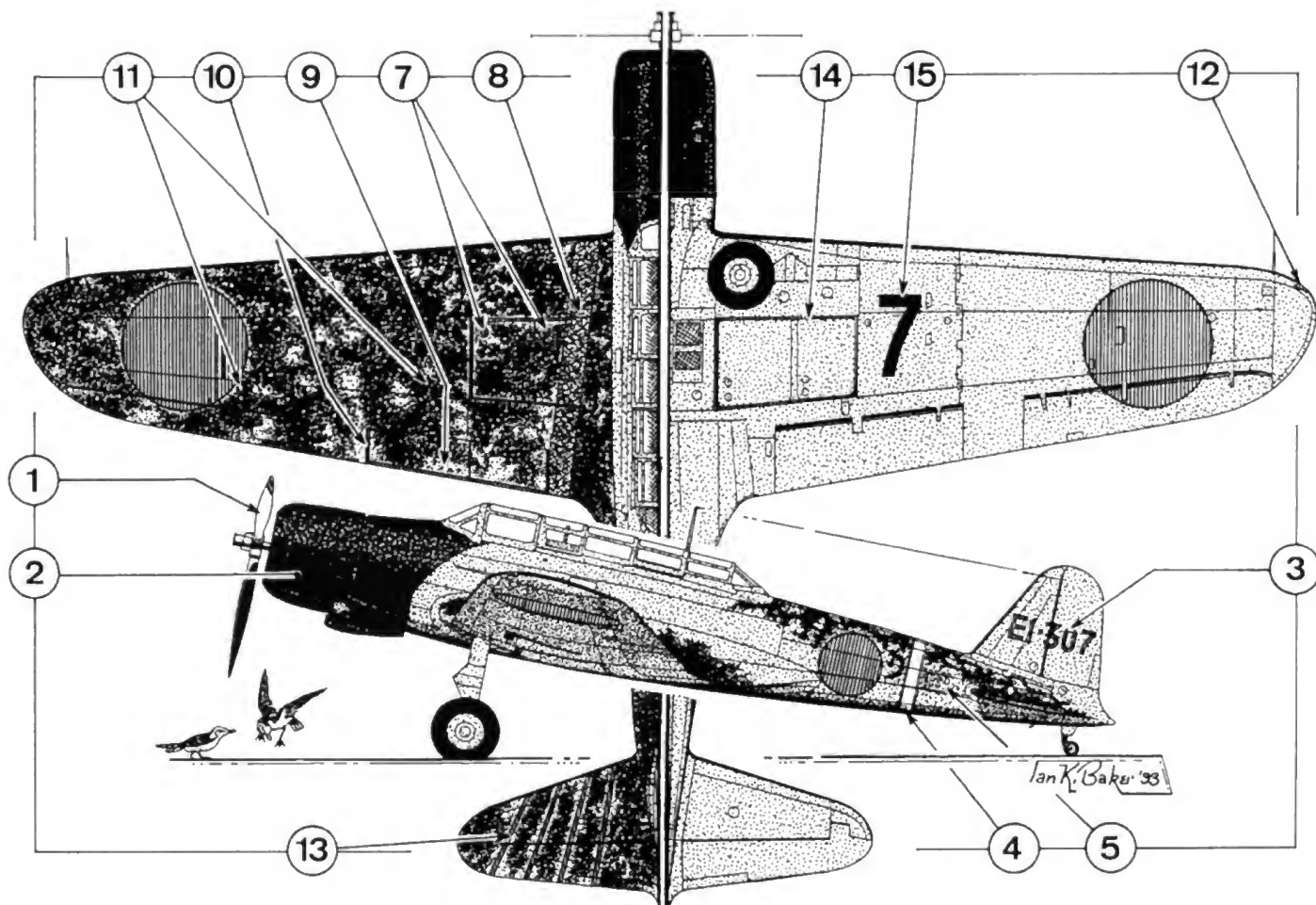
- FS: *0111 or something a bit more plum-colour
- Methuen: 8E6 or 10F5
- Pantone: 490U or 181U
- BS: between 412 Dark brown and 541 Maroon, but rather lighter in tonal value than both of these.

Another 'China camouflage' colour was a medium brown. Long ago Humbrol used to make a medium brown for its Japanese range of Authentic colours. From a much more recent Japanese source we now have indications of a medium brown that is not all that different. But again we are faced with other notably differing medium browns suggested by alternative sources, ranging from tan brown to something more like a yellow ochre:

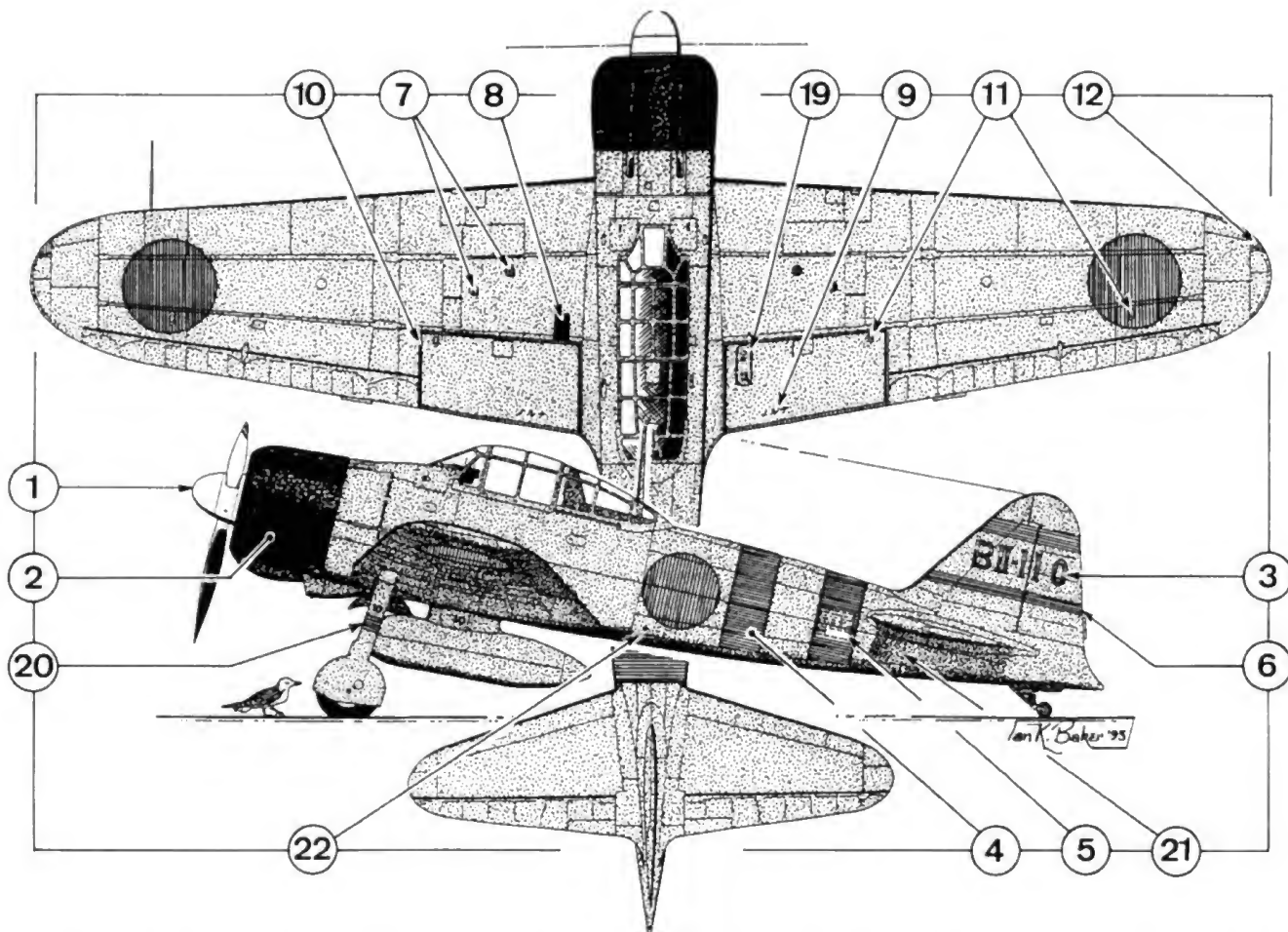
- FS: *0140 or *3245
- Methuen: 7E5 or 6D6



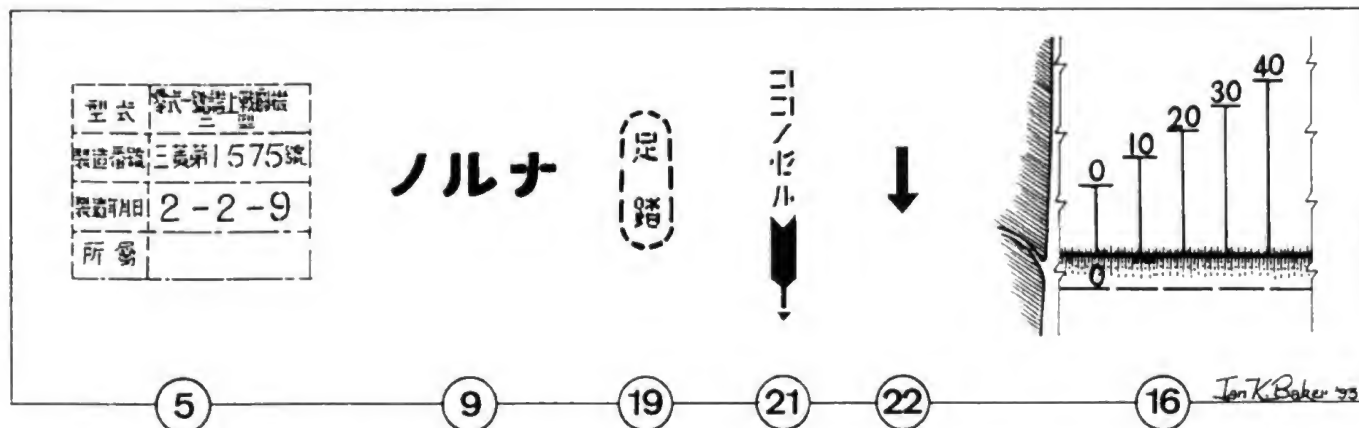
Aichi Navy Type 99 Carrier Bomber, short designation D3A (Allied code: Val) over Pearl Harbour. Overall ame-iro grey except for black nose, all markings red. Two red fuselage tail bands and code prefix 'AI' indicate this D3A1 was off the carrier Kaga.



Nakajima Navy Type 97 Carrier Attack Bomber, short designation B5N (allied code: Kate) over Pearl Harbour. Overall ame-iro grey except for black nose, uneven and rather mottled application of dark green to all top surfaces. One white (red edged) fuselage tail band and (red) code prefix 'EI' indicate this B5N2 was off the carrier Shokaku.



Mitsubishi Navy Type 0 Carrier Fighter, short designation A6M (Allied code Zeke, commonly known as 'Zero') over Pearl Harbour. Overall ame-iro grey except for black nose, red codes and blue bands. Two blue fuselage bands and the code prefix 'BI' indicate this A6M2b was off the carrier Hiryu. Note the individual aircraft no '10' is repeated small, in black or red, on undercarriage cover and on drop-tank pylon, also in white on the front lower edge of the cowl lip. Note also that the fuselage tail bands do not wrap completely under.



Pearl Harbour Attackers: D3A (VAL), B5N (KATE), A6M ('ZERO')

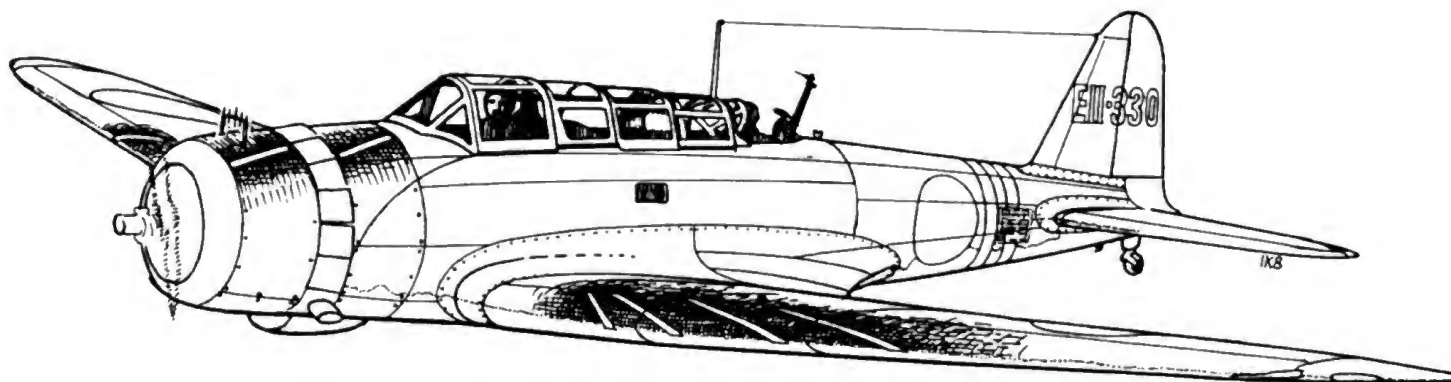
Key to Details

1. Propeller blades: shiny bare metal fronts with two red bands near tips, black anti-glare rear faces; un-painted spinner (A6M).
2. Engine cowlings/nose deckings: black (blue-black, purple-black, charcoal-black & black-green have all been cited); could be more or less shiny depending upon mechanics' rubbing over and degree or weathering.
3. Tailcodes: JNAF tailcodes identified the base ship or unit, and the aircraft's primary mission, as well as providing it with an individual identifying number within its unit.
4. Tail bands: coloured fuselage tail bands were a visual formatting aid, just as the USN later used geometric symbols and letters, providing ready identification of other aircraft from the same ship.

5. Data panels: the equivalent of the serials marked on the fuselage tails of British aircraft. They were black, stencilled on the port side only.
6. Command markings: JNAF command, or rank, markings indicated air group (kokutai) leaders with three bands or bars, squadron (hikotai) leaders with two bands or bars, and flight section (shotai) leaders with one band or bar.
7. Fuel tank filler caps were red.
8. Non-slip walkways were usual on both wings of the B5N (Kate); may sometimes be discerned in photos of the D3A (Val) on the port wing only; and simply consisted of a standing point on the port wing of the A6M ('Zero').
9. Fragile no-step areas usually carried a red stencilled warning instruction.
10. Fragile no-step areas were usually delineated by red boundary lines.
11. Formation lights on wing uppers (port - red,

- starboard - green) to assist with low light and night flying.
12. Navigation lights on wingtips (port - red, starboard - green).
13. Drift indicator markings were frequently seen on upper surfaces of tailplanes, they served to assist the observer/navigator: usually red (sometimes black) against light colours, later white against camouflage.
14. Red-outlined fuel tanks (B5N only).
15. Black underwing number (B5N only) carried over from training exercises.
16. Red flap angle calibrations (D3A only).
17. Said to be dive angle guides, presumably for initial sighting-up of the target, but could be sighting guides for aerial photography.
18. Wheel spats (D3A only) often carried an embellishment in a colour & style particular to

- that carrier/unit; individual number often applied to leading edge of spat.
19. 'Step/stand here' location marked on Mitsubishi-built A6M ('Zero') Models 21, 22 & 32 only.
20. Coloured bands used to gauge the aircraft's weight as the degree of compression of the undercarriage oleo caused one part of the undercarriage cover to conceal a band on the other.
21. Black stencilled characters and arrow indicate the trestle locating point to raise the tail for gun testing, bore sighting, etc.
22. Black stencilled arrow indicating location of step.



Sighting lines on BSN. Several photos of Kate Pearl Harbour attackers show the nose sighting lines shown here, and in one or two the aiming device mounted atop the cowl. These were all clearly involved with lining-up the approach and timing the weapons drop. But a photo of E11-330 clearly shows additional wing sighting lines, as illustrated here. The function of these has not been confirmed, but in all probability they were designated to assist with aerial photography.

- Pantone: between 4635U and 4625U or 139U
- BS: 320(410) Light brown or 411 Middle brown.

Blue

The blue occasionally included in JAAF camouflage and subsequently used for markings on both army and navy aircraft has been variously described as a "medium blue", a "cobalt blue" and a light blue of some undefined kind. It may have been like:

- FS: *5183 or * 5184
- Methuen: 22C7 or 23D6-7
- Pantone: 301U or 3015U (but both are a bit too brilliant)
- BS: 107 Strong blue is near to the above colours but chromatically too strong and darker in tonal value.

The Italian Colours

Some readers will be aware that a study of Italian aircraft camouflage colours of the late thirties into the forties is fraught with difficulties not unlike attempting to pin down Japanese colours. And in this regard 1938 was a particularly problematic year. Unfortunately 1938 was also the year in which Fiat was supplying B.R.20s to the Imperial Japanese Army.

We cannot enter into a lengthy discussion here of camouflage colours applied to Italian aircraft. It simply remains to say that consideration of available information suggests the following four colours as probably 'typical' of those likely to have been applied. (With the proviso that aluminium-painted undersides appear to be just as likely at that time as any pale blue-grey, with the segmented scheme at least).

Brown

- FS: near *0111
- Methuen: 8E6
- Pantone 181U

Green

- FS: *4102
- Methuen 1F4-5
- Pantone 5743U
- BS: like 241(641) Dark green, but slightly lighter

Ochre/yellow

- FS: *3434
- Methuen: 5C6
- Pantone 131U
- BS: like 358 Light buff, but a little darker in tone.

Underside light grey, if applied

- FS: between *5352 and *6314
- Methuen 25D2
- Pantone: 5507U
- BS: 631 Light grey

It must have been the sight of Giallo Mimetico, or whatever light yellow-brown might in fact have been applied, that subsequently prompted the inclusion of a variety of light earths and ivories in some listings of JAAF paint colours.

Interior Colours

Translucent Blue-Green

The colour pigmentation of the highly effective phenolic lacquer protective finish developed for application to internal metal surfaces of the new-generation navy aircraft, sometimes also to army aircraft, seems to have ranged from a bright translucent blue through a translucent turquoise to a translucent lettuce green. One explanation offered for the colour variation has been darkening with age. It has also been proposed that the colour was always blue when applied but turned greener with age. Of course there might be some truth in either or both of these theories. But on the other hand there is surely no logical reason to suppose that pigmentation of this protective lacquer might have been so closely controlled that the colour never varied. The colouring was included, after all, simply to provide a convenient visual indication that the intended coverage was complete.

Concerning 'aotake shoku'...

Some readers will be aware that in recent times there has been a bit of a fashion to refer to this coloured protective lacquer by the Japanese words "aotake", or "aotake shoku". However, it should be understood that this is the same as referring to, say, a yellow coloured lacquer in English by using the words "banana", or "banana yellow". Specifically, a banana is a fruit, not a colour, and "banana colour" is an approximate description of a colour rather than a proper colour name. Moreover, a banana split is not simply a divided yellow fruit but a sweet, with ice-cream, chocolate sauce, whipped cream and crushed nuts... not much yellow in it at all. On the other hand, if we "go

bananas" this does not mean we turn yellow!

Despite the increasing popularity in certain circles for using the Japanese term, it should be borne in mind that "aotake shoku" did not originally mean that tinted protective finish, and does not specifically refer to it. "Aotake", or "aodake" (alternative pronunciations) had been a word applying to a raw green bamboo stalk, a bright green dye, was an alternative name for a flute, meant something made in the form of bamboo or a lacquered bamboo utensil, as well as being an abbreviation for green bamboo handrailing and a contraction of "aotake/aodake shoku" (Source: Tom Hall, Asahi Journal Vol.2 No.4.).

Somewhere down the line, someone attached the expression to that tinted protective finish due, obviously, to the colouring pigmentation it was given. And really the best advice for readers is: avoid being drawn into debates which in any way attempt to link the Japanese expression with a specific colour or a specific protective finish chemistry... "aotake/aodake shoku" never meant any of those things any more than "banana".

From the outside, the blue-green lacquered surfaces were to be glimpsed behind inspection panels, behind control surfaces, in wheel wells, and in cockpits and cabins wherever a topcoat of some other colour was not applied.

It is necessary to remember that the colours given here were just a tinting of a clear finish applied over bare metal, and sometimes the pigmentation would be more intense than other times, just as the actual hue varied. The effect was not really the bright one than many colour profile illustrations might lead one to believe, and with only a dull shine at most.

Modellers are advised that simply applying a green or blue metallic paint does not realistically replicate the original appearance.

- FS: *5193 to *4257
- Methuen: 24D5 to 1E5-6
- Pantone: 5473C/5483C to 385C
- BS: 103 Peacock blue, but lighter in tone, for the first colour. There is no B.S. match for the second.

Cockpit and cabin topcoat colours:

Information relating to finishing colours of aircraft cabin and cockpit interiors of this

period is generally fairly scanty and often none too exacting. In open cockpits of navy aircraft in particular, exposure to salt and weather required protection similar to external surfaces. Plywood was given several coats of varnish and metal surfaces received two or three coats of red-brown primer and a topcoat of enamel variously described as "light grey-green" (for an E13A), "khakiish green" (for a G4M), and "yellowish green" (for a D3A).

It seems a common cabin and cockpit finish for army aircraft in the late thirties and early forties was a dark bluish-grey colour (cited for various types including the Ki-21, Ki-27, Ki-51 and Ki-48).

It is believed that in both navy and army aircraft, early instrument panels were likely to have been found varnished if they were wood, or painted the same colour as the rest of the cockpit interior, as were metal instrument panels. As newer aircraft types appeared with increasingly elaborate instrument panels designed more as a unit, matt black became more common, e.g. in the D3A dive bomber and Ki-27 fighter and Ki-51 light bomber.

The greens could be like...

- FS: *4226 or *4255 or *4151
 - Methuen: 27E3 or 3D-E5 or 2F5
 - Pantone: 5763U or 3985U or 371U
 - BS: 283 Aircraft grey green for the first, and 222 Light bronze green for the third
- The dark bluish-grey colour could be like...
- FS: *5164 but darker
 - Methuen: 22F4
 - Pantone: 546U
 - BS: between 636 PRU Blue and 640 RAF Blue Grey

Dan K. Baker

Next...

Part 4 will cover naval aircraft camouflage, colours and markings 1942-1944. There will be further Colour Notes accompanying the final part in the series.



"We value your comments, corrections and suggestions for possible inclusion in future editions."

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- **AAM/IPMS PORTUGAL**. Please contact Antonio Neves Santos - R. Prof. Camilo Oliverira, 86A - 4420 GONDOMAR or Tel: 02 4540525.
- **THE ABERDEEN MODELLERS SOCIETY**. Contact David Robertson, 27 Howes Drive, Aberdeen. Tel: 01224 690895.
- **ABINGDON IPMS**. For information contact Tony Clements on 01235 522893.
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- **EAST KENT MODEL CLUB** meets in Ramsgate. For details contact Stu Davies on 01843 867404.
- **EAST MIDLANDS MODEL CLUB**. Contact Gordon Upton on 01455 230952 (day) or 01455 878722 (evenings).
- **IPMS EAST NEUK MODELLING CLUB** (in North East File). Contact Brian Murray. Tel: 01334 655131 for details.
- **ESSEX SCALE MODEL SOCIETY** (incorporating Chelmsford Model Club). Contact D. Ball on 01245 604552.
- **ESSEX IPMS (INCORPORATING Harlow Scale Model Club)**. For information please contact Mr. J. Bawden 01279 860730.
- **"FAMAS" (PRONOUNCED "FAMOUS")** journal of the Frog & Airfix Model Aircraft Society. Contact: FAMAS, 35 Rosebery Road, Suffield Park, Cromer, Norfolk. NR27 0BX.
- **IPMS FENLAND/SPALDING MODEL GROUP**. Contact Peter Emms on 01775 767729.
- **IPMS PROVINCES OF FRANCE**. The URL for IPMS Provinces of France: changed to <http://www.multimania.com/ipmspdf/index.htm>
- **GLASGOW IPMS**. NON-IPMS members welcome. Contact Bruce Smith on 0141 563 2098.
- **GLOUCESTER IPMS**. CONTACT: Jeff Brown, 123 Pleasant Way, Beeches Park, Cirencester. GL7 1BJ. Tel: 01285 659254.
- **GRANTHAM MODEL CLUB**. Contact John Tinkler on 01476 870816 or Craig Gardiner on 01476 401483.
- **GUERNSEY PLASTIC MODELLERS GROUP**. Contact Dave Nash, 7 Pierre Perce Villa, Prince Albert Road, St Peter Port, Guernsey. GY1 1EZ. Tel: 01481 728186.
- **THE HARROW MODELLING SOCIETY**. Contact Stewart on 0181 427 6858 or Roger on 0181 997 6051 for details.

- **HOBBY DEPOT MODELER CLUB**. Contact M. Fuller, 1524 Est Summer St., Hartford, WI 53027, USA.
- **THE HORNCURCH BRANCH OF THE IPMS**. Contact K. Sparks, 8 Brockdish Ave, Barking, Essex. TG11 9DS.
- **ISCA SCALE PLASTIC MODEL CLUB** - East Devon. Contact Mr K. Sweeting 10, Old Barn Close, Stokecanon, Exeter, Devon. EX5 4AD.
- **KEIGHLEY PLASTIC MODEL SOCIETY**. Contact John on (01535) 665722 or Eddie on (01535) 671192.
- **IPMS KENT**. For details contact Jim Chapman, 77 Sutherland Avenue, Petts Wood, Kent. BR5 1QY Tel: 01689 822669.
- **IPMS KINGSTON (CANADA)**. Contact Tony on 389 4878.
- **LINCOLN MODEL CLUB (IPMS LINCOLN)**. For more information, contact Ian Crawford on 01522 533380.
- **IPMS (CANADA) LONDON**. Contact Kerry Traynor on 1-519-453-4818.
- **LORDSWOOD (JUNIOR) MODEL CLUB** is meeting every Saturday between 4.15 and 6.15pm at the Lordswood Public Library, Kestrel Road, Lordswood, Chatham, Kent. ME5 8TH. The club supplies basic modelling materials and equipment and is sponsored by REVELL (GB), so why not go along and have a look. For more details contact Mr D. Jadoul on 01634 841504.
- **LOTHIAN MODELLERS CLUB** and Edinburgh IPMS. For details contact Ian Hanratty on 0131 665 4087.
- **LUSO-FANATICS**. QUARTERLY newsletter about Portuguese Military Aviation. Contact Dr Rui Domingues. P.O. Box 52054, 4202 - 801 Porto, Portugal. E-mail: ruidom@mail.telepac.pt
- **MARITIME MODELLERS CLUB**, South Africa Contact Andy Williams 0331-961-850 or Alan Farra 0332 306446.
- **MEDWAY MODELLING CLUB**, Gillingham, Kent. Contact Harry Greenwood, 01634-829531 or Alan Starkey, 01474-357064.
- **MILDENHALL PLASTIC MODEL CLUB**. For information contact Peter on 01638 742354.
- **MILTON KEYNES MODEL CLUB**. Contact Phil Smith on 01908 505988.
- **NORFOLK SCALE AIRCRAFT MODEL GROUP**. For information call John Turner on 01603 890595.
- **NORTH ESSEX MODELLERS**. Ring Jerry Baker on 01206 855080 or Mark Harris on 01206 842694 for details.
- **NORTH SOMERSET MODELLERS** Society. For more information ring Fred Tooke on (01934) 416798.
- **NORTH STAFFS MODEL CLUB**. Contact Stefan on 01782 618181 or Phil on 01782 544612 for details.
- **NORTH WALES MODELLING CLUB**. Those wishing to form a scale modelling club in North Wales please contact Justin Gorka on 01492 532101 (day) or 01492 543590 (evenings).
- **NORWICH SCALE MODEL GROUP**. For more information please contact John Turner on 01603 890595.
- **NOTTINGHAM AND DISTRICT IPMS**. Contact James Downham, 17 Quantock Close, Nottingham, NG5 9QA or Tel: 0115 2696799.
- **GREATER PETERBOROUGH MODEL CLUB**. For details ring Jim Sylvester on 01733 571728.
- **PLYMOUTH SCALE MODEL ASSOCIATION**. Contact Roger Haskell on 01752 267527 after 6pm.
- **POOLE VIKING CLUB (INC DORSET IPMS)** meets on the 1st Wednesday of the month from 7.30pm to 10.30pm at the Poole Civic Centre Club.
- **ROBERTSBIDGE AVIATION SOCIETY MODEL CLUB**. Please contact David Mornice, 27 Derwent Drive, Tunbridge Wells, Kent. TN4 9TB Tel: 01892 520856.
- **SALISBURY IPMS**. PLEASE contact: Peter James, 'Lithonien', 18 Ilyton Avenue, Firsdown, Salisbury. Wilts. SP5 1SH. Tel 01980 862403.
- **SHROPSHIRE SCALE MODELLERS (IPMS Telford)**. Contact Gary Stevens, 8 Whittemere Road, Shrewsbury. SY1 3BT.
- **IPMS SOUTH EAST LONDON** please ring Paul Brack on 0181 650 6504 or Alan Partington on 0181 697 6929.
- **SOUTHEND-ON-SEA MODEL CLUB** (South East Essex IPMS). Contact Dean on 01702 603031.
- **SOUTH LONDON SCALE MODEL CLUB**. For details please ring Eric on 0181 685 9110.
- **ST. EDMUNDSBURY SCALE MODELLERS**. Contact Rod Jones (Secretary) on 01284 - 766104.
- **STAFFORD IPMS MODEL CLUB**. For information contact: Terry Campion, 3 Leedhams Croft, Walton-on-Trent, Swadlincote, Derbyshire. DE12. Tel: 01283 713602.
- **IPMS STE HELENE (MONTREAL, CANADA)**. For information contact Jean Marc Perreault. Tel: 450 656 7243.
- **STIRLING & DISTRICT MODELLERS SOCIETY** SAE for programme to W.Wood, 37 Woodlands, Sauchie, Clacks. FK10 3PJ. Tel: 01259 722428.
- **SUNDERLAND SCALE MODEL CLUB** meets in Fulwell, Sunderland. Contact Peter Hall 0191 513 0489 or David Dykes 0191 548 7777.

- **SUSSEX MODEL GROUP**. For information please contact 01403 782638.
 - **SUTTON COLDFIELD MODEL MAKERS' SOCIETY**. For more information contact Robert Day, 'Ashgrove', Diggle Lane, Fillongley, Coventry. CV7 8DQ. Tel: 01676 540469.
 - **TAYSIDE MODELLING SOCIETY**. Details from Keith Herd, 38 Ashgrove, Perth. Tel 01738 629555 (Sorry no under 16's).
 - **THURROCK SCALE MODEL CLUB**. For more information please contact John Davies on 01375 406895 or Steve Moore on 0708 853139.
 - **IPMS TORONTO (CANADA)**. Contact IPMS Toronto, 3219 Yonge St., Suite 334, Toronto, Ontario, M4N 2L3, Canada.
 - **WALLINGFORD (IPMS)**. If you would like to know more contact Paul Dean on 01844 215360, or George Clark on 01491 201902.
 - **WARRINGTON IPMS**. For details contact Dave Foxall on 01925 825619.
 - **WATFORD SCALE MODEL CLUB**. For more information call Nigel Foster on 01582 667210.
 - **WEST MIDDLESEX IPMS**. Contact Les Clancy on 01784 465191 or Tony Horten on 0181 384 3840 for details.
 - **YORK & DISTRICT PLASTIC MODELS SOCIETY**. Contact Chns on 01430 873408 or Joel on 01904 766895.
 - **SPECIAL INTEREST GROUPS (SIGS)** Nachtigall. A new SIG for all those interested in Nightfighters. For more information contact Anthony Oliver on 01228 529297 after 6pm.
 - **IPMS GULF WAR SIG**. Contact G Madgwick, 9 Hedgehill Road, East Challow, Wantage, Oxon. OX12 9SD. Tel: 01235 769746. Email: gary@patrol.i-way.co.uk
 - **WINGS 'N' WIRES**. IPMS World War I Aircraft SIG. Contact Alan Crow, 55 Morven Lea, Blaydon, Tyne & Wear. NE21 4EY.
 - **SIGPMA A NEW SIG** For all those interested in Portuguese Military Aviation. Contact. P.O. Box 52054, 4202 - 801 Porto, Portugal. E-mail: ruidom@mail.telepac.pt
 - **HELICOPTER MODELLERS** - interested in a quarterly newsletter produced by like minded enthusiasts? For more details contact: Pete Tasker, 22 Brookfield, Haslington, Crewe. CW1 5WE.
- New Clubs (Forming)**
- **NEW CLUB BEING** formed in the Lancashire area. For more information contact Richard on 01204 699379 or Dave on 01204 695375.

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Events

Scale Aviation Modeller International will advertise forthcoming events in this column free of charge for event organisers who wish to give advance notice of their shows. We will continue to run your notice until the event is held, space permitting.

● **MAY 23RD.** Midland Expo '99 at Leasowes Leisure Centre, Kent Road, Halesowen nr. Birmingham from 10am to 5pm. For more info. contact D Jeffery (0121 550 7184) or C Greville (0121 360 4905).

● **MAY 29TH** Torbay Military Modelling Society Annual Exhibition at Torquay Town Hall, Torquay, South Devon. Open 10am to 5pm. Admission Adults: £1, Children under 16 and OAPs: 50p.

● **MAY 29-30TH** Squadron Scalefest '99. (IPMS North Central Texas). Contest, vendors, open house. At the Exhibit Hall, Rodeo Center, 1818 Rodeo Drive, Mesquite, Texas USA. For more information send an SAE to: Squadron Scalefest '99, PO Box 180778, Dallas, Texas 75218-0778 or e-mail jccooke@dnramp.net or www.ipmsnct.org.

● **5TH JUNE.** North West Scale Modellers Model Show '99. Hosted by the Seattle Museum of Flight. 10am to 4.30pm. For further details contact Steve Holmes 1-425-353-6998 or Bill Johnson 1-425-257-3284.

● **JUNE 5TH, 1999.** Oregon Society of Scale Modellers Annual Model Car Contest & Swap Meet. For more information call: Floyd Blakey (503) 618-8524, or e-mail OSm@racingmail.com <mailto:OSSM@racingmail.com>

● **SALISBURY MODEL CLUB** Show will be held on June 5th at the Hall of Wyvern College, in Laverstock, Salisbury Wilts. Contact the Show Manager at 13 Park Street, Salisbury, SP1 3AT. Tel: 01722 327498/Fax: 01722 501518, e-mail - d.lane@diad.pipex.com.

● **THE NORTHERN MODEL Show.** 5th/6th June at Templepark Centre, South Shields. 10.00am to 4.30pm both days. Contact: Rob Sullivan, 6 Riverdale Close, Blackhall Mill, Tyne and Wear, NE17 7LW.

● **JUNE 12TH/13TH** TSMC Model Expo 99 will be held at the Thuringowa Sound Shell, Queensland, Australia. For more information contact Wendy Thompson on 07 47890487, or write to the club at: PO Box 1644, Aitkinvale M.C., Townsville, Qld 4814, Australia.

● **JUNE 27TH.** Scale Hobby Expo. Buena Park California. 9.00am to 3.00pm. Sequoia Conference Centre, 7530 Orangeflorpe Ave. Contact The Warpath Productions Post Office Box 33754, San Diego, CA 92163. Toll Free No: 1-877-EXPOS2000. E-mail: Expos20@IX.NETCOM.COM.

● **JULY 4TH.** A Fort Full Of Models at Newhaven Fort, Newhaven, East Sussex.

● **JULY 18TH.** Wallington IPMS will be holding an open day at the Club Room, Adult Workshop, High Street, Wallington, Oxon from 11am to 4pm. 50p admission with all proceeds to charity. For more information contact Geoff Wakeham on 01491 833471, or George Clark on 01491 201902.

● **AUGUST 7TH.** Virginia Shootout. Model show and contest. Roanoke Airport Marriott. 2801 Hershberger Rd. NW. For information contact Tommy Carr (540) 345-2713 or E-Mail: TCarr83700@aol.com.

● **IPMS AVON.** The 10th Anniversary IPMS Model Show will be held on Sunday 15th August at The Pavilion, Bath. Further details from Stephen Lucas on 01454 316439.

● **AUGUST 22ND.** Leicester Model Show at the Y.M.C.A. Centre East Street Leicester from 10am to 4pm for more information contact: 0116 2107 640 or 0116 2333 238.

● **AUGUST 29TH** Northern Model Expo. Bolton School Exhibition Centre, Chorley New Road, Bolton. Open 10am to 5pm. For details contact: Ray Ashworth (01204 669770), Dave Vickers (01253 622319).

● **SEPTEMBER 4TH.** IPMS Brampton Model Show 1999 will be held at the Corn Exchange, St. Ives, Cambs from 9 until 5. Enquiries to Phil Cater on umrch@globalnet.co.uk or to Sam Bratby on 01487 830689.

● **SEPTEMBER 5TH.** AeroSpace & Vehicle Club Model Show at The Community Centre, Church Rd, Wombourne, West Midlands. Just off the A449. For details send SAE contact J. Van Leerzem, 163 Bells Lane, Stourbridge, West Midlands. DY8 5DS.

● **IPMS CLEVELAND MODEL Show** will be on the 11th September 1999 at the Priory Social Club, Maryton Road, Acklam, Middlesbrough. Doors open at 10am and admission will be £1 for adults with OAPS and children under 14 free.

● **CHILTERN SCALE MODEL Club** will be holding a model show at the Mosquito Museum, Salisbury Hall, London Colney, Herts. The provisional date is 12th September, for further details please contact the show co-ordinator, Chris Russell, 55 Stagsden Road, Bromham, Beds. MK43 8PY.

● **IPMS (UK) LEICESTERSHIRE BRANCH** presents the 1999 Friendly Model Show at Broughton Astley Village Hall on Sunday 12th September 1999. Open 12am to 5pm. Adult admission £1.50. Juniors (16 and under) free when accompanied by an adult. Contact: 01455 284600 or 01455 284305.

● **12TH SEPTEMBER.** Sunderland Scale Model Club Model Show at the Nissan Social Club and Sports Hall, Washington, Nr Sunderland. 10am to 4pm. For more information contact 0191 5130489, 0191 548 7777, 0191 548 0744 or 0191 416 5742

● **PENSACOLA, FL, USA.** October 9-10 1999. IPMS/Pensacola Modelers Modelfest 1999. Contact: Jim Scott, 3251 Woodwind Pl., Pensacola, FL 32504 USA 850-432-8413 or e-mail JSCOTTGTP@aol.com.

● **OCTOBER 16TH TO 21ST.** Midlands Model Engineering Exhibition at the International Exhibition Centre, Donington Park, near Derby.

Readers Classified

For Sale

● **MAGAZINE 'FINE SCALE MODELER'** from 1990 to 1996. (Complete years). Offers to Bellonio Pierre, 34 Rue Chalusset, 13013 Marseille, France.

● **19 COPIES OF FLYING - The New Air Weekly** (from April to September 1938) in good condition. £75 and on. Contact J. D. Rawlinson on 01942 876039.

● **1/48TH SCALE MDC** Fairey Swordfish, unmade and complete. £80. Call Andy on 01347 848857.

● **27 MINT BACK** issues of Scale Aviation Modeller International for sale. November 1996 to August 1998 complete plus 6 earlier issues featuring Italian and Japanese subjects. Offers invited 01292 877273.

● **COLLECTORS ITEM KITS:** Original Frog: Mosquito IV/VI, Focke Wulf Ta 152H-1, Gloster E 28/39 (partly built, stopped, fuselage scale = 1/60th), Ju 87G Stuka, Airfix: Fw 190D-9 (old plastic bag 1950s), Il-2 Sturmovik (1960s). Booklets: War Planes of WWII. William Green/Macdonald. Vols. 1, 2, 3, 6, 7, 8, 9 and 10. Write to F. Wittens, Guldensporenlaan 39, B-2820 Bonheiden, Belgium. Email: Wittens@pandora.be.

● **HUNDREDS OF KITS,** mainly US and British 1/72nd and 1/48th scales. Including Revell F-105F, Academy 1/48th F-15C Eagle, Tamiya Skyray. Will consider exchange. Contact Will on 0171 371 0890.

● **RAF FLYING REVIEW** 1948 to 1970. Plastic Kit Constructor Magazine No. 1 (April 1973) to date. Military in Scale No. 1 to date. Zineek Magazine, first eleven issues. Contact J. Fraser on 01968 672628.

● **COLLECTORS SALE OF WWII** Plastic kits on 12th June 1999 10am to 4pm at The Barn, Baston Playing Fields, Baston, Peterborough.

● **800+ UNMADE MODELS** for sale, mainly aircraft. Airfix, Frog, Fujimi etc. For list please send a large SAE to: A. Cooper, 24 Breach Close, Steyning, West Sussex, BN44 3RZ or email aaa@triple-a.demon.co.uk. List online at www.triple-a.demon.co.uk/list.htm.

● **TAMIYA 1/48TH DAMBUSTER/GRAND** Siam Lancaster, unbuilt, mint condition, £35 plus postage. Chris Clifford, Tel: 01733 898235 (eve) or e-mail: chris.clifford@ecm.emap.com.

● **SELLING COLLECTION OF SAMI** magazines from first copy. 1995 11 mags, 1996 6 mags, 1997 8 mags, 1998 8 mags all at £1 each. Collect or pay postage. Will not sell singles. Contact George on 0171 515 9480.

● **AIRFIX 1/24TH HARRIER** £25, Revell 1/32nd F-15B £12, Echelon 1/32nd E.E. Lightning £50 plus others in 1/32nd. King David Martin 01733 380250.

● **AIRCRAFT KITS FOR SALE,** mostly 1/72nd scale. I am also selling a large selection of original Frog kits and other rare items. Please write with SAE for lists to: Tony Wilkins, 3 Cloister Drive, Darwen, Lancs. BB3 3JX.

● **DRAGON 1/48TH MISTEL** £30.00, Revell 1/48th B-25 Mitchell 'Dirty Dora' £15, Heller 1/48th F4U Air Racer £7.50, OEZ 1/48th Hi-Tech MIG-21 £8 plus others. Phone Howard on 01842 755955.

● **TIME/LIFE HISTORY OF WORLD WAR II,** 39 volumes as new condition £200. Buyer to collect. Tel: Newport (01633) 770633.

● **'BEFORE CENTURY' BOOK** as reviewed in May issue, brand new £15 plus £1 p&p. Call Bob on 0117 991 2703.

● **SCALE MODELS MAGAZINE (M.A.P.)** Vol. 1-21; Vol 1, 2, 4 & 5 c/w wire binders. Also Scale Aircraft Modelling Vol. 1-16. All for sale by volume. Best offer for each volume by August 31st 1999. Secures. Buyer collects. Contact (01643) 701742, Somerset, England.

● **WINGS OF FAME** volumes 1-12 £45 plus carriage. Please leave message for Bob on 0117 991 2703.

Wanted

● **KAYABA AUTOGYRO KIT** in 1/48th. Details of make etc. unknown. Please contact Pete Tasker, 22 Brookfield, Haslington, Crewe. CW1 5WE 01270 258368.

● **MICROSCALE DECAL NO. 48-82** F-8 Crusader VMF(AW) 235. Also Squadron Signals 'Automobile' by Lou Drendel? Reasonable prices paid. Please Contact Grahame on 01233 635675 or email sara&graham@bredere.freemove.co.uk

● **PHOTOS OF 1950s** military planes F-86F, T-6, H-19, H-34, most air forces and any model ships USS Lexington, USS Saipan/oil tankers. Ian Cambell, 8d Lindsey Avenue, York.

● **SE5A & WRIGHT BROTHERS FLYER.** Hasegawa 1/8th scale Museum Models wanted (unmade and in manufacturers box). Tel: 01245 422565 or email: CParkins@estec.esa.nl.

● **BLUE STEEL MISSILES** from Airfix Vulcan kit. Does anybody have some spare, made or unmade. Perhaps you didn't use yours? Part No. 67 also required so I can modify a couple of Victors. Can you help? Dave Taylor 01769 574240.

● **I AM SEARCHING** for any Royal Air Force Flying Review from before September 1953. Write to F. Wittens, Guldensporenlaan 39, B-2820 Bonheiden, Belgium. Email: Wittens@pandora.be

Trade

● **FULL CHOICE OF 1/72ND,** 1/48th & 1/35th scale Polish, Czech, Russian, Ukrainian and Moldavian kits (incl. collector's items) available on exchange basis. W. J. Gawrych, Nowowiejska 4 m.10, 00-649 Warsaw, Poland. Fax 004822 6288741.

● **PHOTOS OR DRAWINGS** (B&W ones are fine) of P-61A Black Widow's main gear wheel wells. I can offer a lot of drawings of WWII aircraft for exchange. There are about 2,800 sheets of drawings in my collection. L. Maly, Cernohorskeho 741, 288 02 Nymburk, Czech Republic.

Information Required

● **SCALE DRAWINGS OF AEROSPACE LINES** Guppy 201 or SuperGuppy. Technical details and any relevant information, illustrations or titles of relevant publications. Contact: Alan Fanning, 32 Burgess Road, Waterbeach, Cambridge, CB5 9ND.

Penfriends

● **I AM A MODELLER** from Slovakia who models mostly US Navy Aircraft. I am interested in contacting other readers who can help me with books, photos or detail information. Contact: Oliver Sinay, Racianska 145, Bratislava, 83105, Slovakia, Europe.

Thanks

● **THANK YOU** to the anonymous reader who sent me the decals I requested in Vol 5/4 for the Mosquito BOAC markings. They were much appreciated.

Little Signs

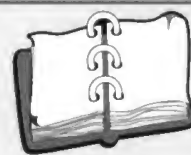
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Events Diary at a Glance



1999

May 23rd ● Midland Expo 1999 at Halesowen near Birmingham

May 29th ● Torbay Military Modelling Society Annual Exhibition

May 29-30th ● Squadron Scalefest '99. (IPMS North Central Texas)

June 5th ● North West Scale Modellers Model Show '99 USA

June 5th ● Oregon Society Modellers Model Show

June 5th ● Salisbury Model Club Show.

June 5th/6th ● The Northern Model Show.

June 12th/13th ● TSMC Model Expo 99 (Australia)

June 27th ● Scale Hobby Expo (California)

July 4th ● A Fort Full Of Models, Newhaven.

July 18th ● Wallington IPMS Adult Workshop

August 7th ● Virginia Shootout, Model show and contest

August 15th ● The IPMS Avon 10th Anniversary IPMS Model Show

August 22nd ● Leicester Model Show

August 29th ● Northern Model Expo. Bolton School Exhibition Centre

September 4th ● IPMS Brampton Model Show 1999

September 5th ● AeroSpace & Vehicle Club Model Show at Wombourne, West Midlands

September 11th ● IPMS Cleveland Model Show

September 12th ● Chiltern Scale Model Show

September 12th ● The IPMS Leicestershire Friendly Model Show

September 12th ● Sunderland Scale Model Club Model Show

October 9th & 10th ● Pensacola, USA, IPMS Modellers Modelfest 1999

October 16th to 21st ● Midlands Model Engineering Exhibition

Special Notice COLLECTORS SALE

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Baston, Peterborough

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Show Report: IPMS Norway Nationals

Photographic coverage by Nils Mathisrud



This event took place on the 20-21st February 1999 at the Defence Museum, Oslo.



Roy Forus won the 1/32nd aircraft class with this F-16XL. The model is based on the Revell kit, but heavily corrected and upgraded. The model also won the Visitors Most Popular Award



A nicely built CF-104 Starfighter won the 1/72nd scale jet aircraft class. The model was built by Bernt Magne Øvregård



This 1/48th scale F-84G Thunderjet in the markings of the Royal Norwegian Air Force 338 Squadron was another class winner. The squadron markings and nose art are custom-made by the modeller, Nils Mathisrud



A good weathering job gave the 1/48th jet aircraft class win to this MiG-29A, built by N. H. Pettersen



Tor Gravdahl built this 1/48th scale Fw 190D-9 in the markings of III./JG26. It was awarded a VHC



The 1/144th and smaller aircraft class was totally dominated by Ruben Husberg, bringing home the class winner, Very Highly Commended and Highly Commended for his Boeing 767-200 and two YS-11s



This Mosquito FB Mk VI in the markings of No.577 Sqn, brought André Kristoffersen a Very Highly Commended. It is (of course) built from the new 1/48th scale Tamiya kit



Models built from vac-formed kits always attract interest. Guy Baillie got an Highly Commended for this 1/48th Fairey Gannet AS Mk 1 built from the Dynavector kit



Once again, good weathering resulted in a class win for this 1/48th scale P-51B. The model is built by Lars Ness



Another class winner, this 1/48th scale Junkers Ju 87D-5 of Stab. 1./St.G 5 was built by Tor Gravdahl



The smallest aircraft model in the show was this 1/72nd scale Sopwith Schneider, another class winner built by Bernt Magne Øvregård

Technical Data

Manufacturer: Classic Airframes
Scale: 1/48th **Price:** £19.95
Type: Limited Run Injection Moulded Plastic, Resin, Etched Brass and Vac-form Clear
Parts: Plastic 30, Resin 12, Etched 12, Clear 2
Decal Options: 2
Manufacturer: Classic Airframes (see Advertisers Index)
UK Importer: Hannants

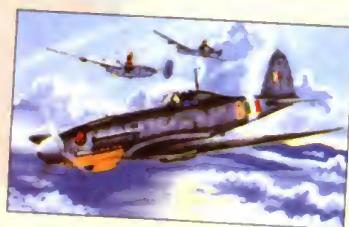
1/48th
SCALE

Classic Airframes

Centauro!

by David Batt

This 1/48 scale kit from Classic Airframes represents the finest fighter to come out of Italy during WWII, the Fiat G.55.



History

In wartime significant aircraft can go from concept to completion in an incredibly short time. The North American Mustang and Commonwealth Boomerang are great examples of this. However, even in an atmosphere of urgency some aircraft get held up, if not cancelled, for the most ridiculous reasons. The Fiat G.55 was one of those that gave its parent company a particularly bad time as the Italian Air

Ministry 'moved the goalposts' to protect various commercial interests on a number of occasions. It all began in the spring of 1939 when Fiat received official approval to develop their A.38, an upright V-16 engine with an estimated power output of 1,200 horsepower. Ing Giuseppe Gabrielli conceived the G.55 around this engine and by July the aeronautical calculations were complete.



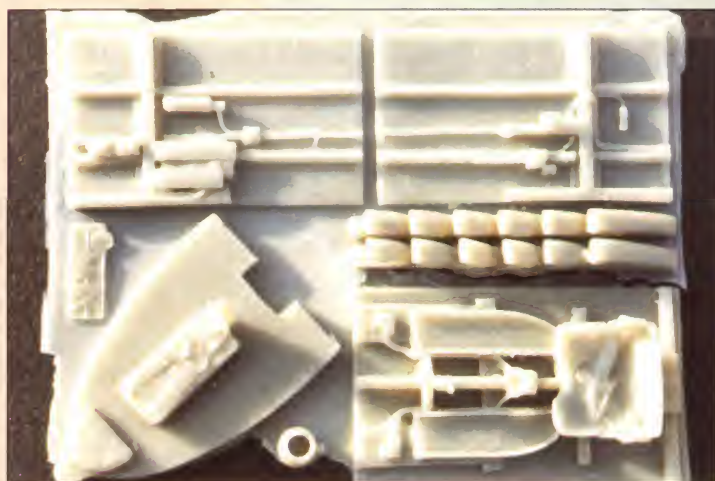
The etched brass fret and acetate film

Even though tensions ran high in Europe there were no real developments for nearly a year. Bench testing of the engine

began in June 1940, by which time Italy had entered the war. The whole project then saw some changes after the first flight



The entire contents of the kit!



The resin components have been produced by CMK



Detail of the fin shows the 'before' (left) and 'after' (right) effects of taking an engraving tool on the hinge line of the rudder



The lower fuselage half shows the gun trough before it's sharpened up, as can be seen in the upper fuselage half

of the Macchi C.202 which employed the Daimler Benz DB 601A, when the Air Ministry changed the original specification to ensure the Centauro would outperform the Folgore. A deadline of June 1941 was given to Fiat and after several development problems with the A.38 engine the Centauro was redesigned to accept the 1,475 horsepower DB 605A, the powerplant used in the Bf 109G, while in January 1942 the required armament of the 'new' fighter was finally established as five guns, initially a single 20mm motor cannon and four cowling-mounted 0.5in. calibre machine guns. Another major change around this time was the move from a strong and lightweight single-piece wing to a four-piece structure for ease of road transport.

On 30 April 1942, some three years after it was conceived, the Centauro prototype finally took to the air. Although the tail went through a series of modifications the aircraft had an excellent high altitude performance with a speed of 636 kph at 8,000 metres altitude, while testing to 10,000 metres showed consistently good handling.

The test period lasted from April to October and another change was introduced, this time to the armament with two of the fuselage machine guns being replaced with two wing-mounted 20mm cannon. On 4th November 1942 evaluation was complete yet it was June 1943 before the aircraft reached its first squadron, the 353a at Ciampino Sud. With such a prolonged development period it is not surprising that so few Centauro were built, and only 218 aircraft were actually completed, including wartime and post-war use.

The Kit

Like most of the Classic Airframes offerings the G.55 features a multimedia presentation. There are 30 injection moulded parts, a small etched brass fret providing 12 pieces including a seat harness, and a small bag of 12 cast resin pieces. In addition to this there is a vac-formed transparency carrying two



Another view of the nose under construction shows not only the amended gun trough but also the addition of the small air intake above the exhaust and the 'fences' above and below the exhaust itself



This close-up of the rear end shows not only the final work to the rudder line, but also the addition of the rear aerial connector and, barely visible in the shadow below the tail, the small blister fairing just aft of the tailwheel well

canopies and a small photographic film for the instruments. The small but very clearly printed decal sheet is manufactured by Microscale.

The injection moulded parts are notable for their very restrained surface detail which, in the main, consists of incredibly finely engraved lines, perfect for representing the constructional panelling. However some of these lines are, in my opinion, a little too fine to outline the removable access panels and far too restrained to properly model the control surfaces.

With mixed-media kits the first step in construction is preparation. Some of the resin parts, particularly the cockpit sidewalls and floor, had to be sanded down



The cockpit interior made up from the kit's resin components. The seat belts are moulded as part of the seat pan and backrest and the way in which the body straps project forward and over the seat pan is a neat touch. However, I believe that the sidewalls are inaccurately proportioned with the result that the instrument panels are all but impossible to install

against wet and dry paper to reduce their thickness. All the resin was given a good scrubbing with weak detergent and an old toothbrush, while the etched brass parts were annealed in a gas flame before being primed with Halfords spray acrylic primer.

Starting Construction

I have to admit I am a little surprised that Classic Airframes do not provide all the control surfaces as resin parts (this method of production does provide a razor sharp finish whenever it is needed) for the injection moulding process used in this kit produces clumsy edges. I was obliged to reduce the trailing edges of the wings and vertical tail by sanding them against a flat surface covered with a wet and dry paper, in a fashion familiar to any builder of vac-formed kits. At this stage I also went

against wet and dry paper to reduce their thickness. All the resin was given a good scrubbing with weak detergent and an old toothbrush, while the etched brass parts were annealed in a gas flame before being primed with Halfords spray acrylic primer.

instrument panels as instructed I could not for the life of me figure out how the smallest supplementary panels were supposed to be installed and was forced to leave them out of the project. When the monograph finally turned up it did indicate that the kit's interior is inaccurate, to such a degree that I fear scratch building would be the only effective way of producing an authentic cockpit interior. An inexplicable omission is the gunsight, which had to be scratched together from some Contrail plastic rod.

Moving on to the assembly of the fuselage halves I decided at the last minute to drill out and deepen the gun troughs in the upper part of the nose, and reference to photographs in the monograph showed that there was a prominent air intake on the starboard side of the nose which was added at the last minute from plastic rod carved and drilled to suit.

The cockpit interior is fitted as a tub through the wing opening and leaves a gappy joint around the rear bulkhead that can only be cured by filling and sanding after construction.

The bank of exhausts and the large carburettor intake on the port side of the nose are added from resin parts. To be completely convincing the exhausts need the addition of an edging strip from thin plastic card both above and below the bank of ejectors, while the front of the intake benefits from being drilled out.



First stage in the production of a clear navigation light. This is a very easy modification and the raw materials appear in most mainstream kit. It's not necessary to polish the lens to a mirror finish after filing the sprue to shape, for a coat of gloss varnish gives all the finish you need

around the edges of the control surfaces with an engraving tool, and separated the elevators from the tailplane so that I could model these in a slightly drooped position.

All the interior parts were sprayed with No.1218 from the AeroMaster range of acrylic paints, Verde Anticorrosivo. I elected to retain the cast seat-harness provided on the resin parts, though the option is provided for them to be removed and etched brass seat-straps to be used if required. One point of note, I can hardly believe that the seat cushion and head rest are bright blue, I assumed this was a typographical error on the instructions and therefore painted them in a medium red brown instead.

Although I tried to assemble the



The most incredible omission in the cockpit is a gunsight. I cobbled one together from some plastic rod and clear sheet, and used more plasticard to make the small periscope-shaped projection just in front of the aerial mast



Detail on the undercarriage. The wheel itself is superb and a lot of care is needed to clean up the mould line without losing all the tyre tread detail, but the leg is barely adequate. I drilled through the wheel and leg to take a plastic rod axle for otherwise the wheel just fits where it touches

Construction of the spinner and propeller did cause some problems. The propeller would not fit easily inside the spinner and some time had to be spent with a riffler file to give some clearance around the blade roots. A note is given in the instruction to drill out the front of the spinner for the motor cannon, but I went a little further and fitted a short length of plastic as the cannon's blast tube and this projects slightly forward of the front of the spinner.

The next stage covers the construction of the wings and it is not possible to simply drop the interior of the wheel wells into place. Some filing and trial-and-error adjustments are needed to get the wheel well inserts properly into place. To add a

little finesse to the completed model I elected to fix transparent navigation lights to the wing tips. This is a very simple task; a small cut out is made in each wing tip as appropriate and a piece of clear sprue glued into place, being filed into shape when completely dry.

With the wing and fuselage completed they are brought together in the normal modelling assembly fashion but care has to be taken to make sure that the upper parts of the radiator bath, where it projects into the fuselage, is filed back to clear the cockpit floor. The joint is good, filler only being needed around the rear of the root fairing.

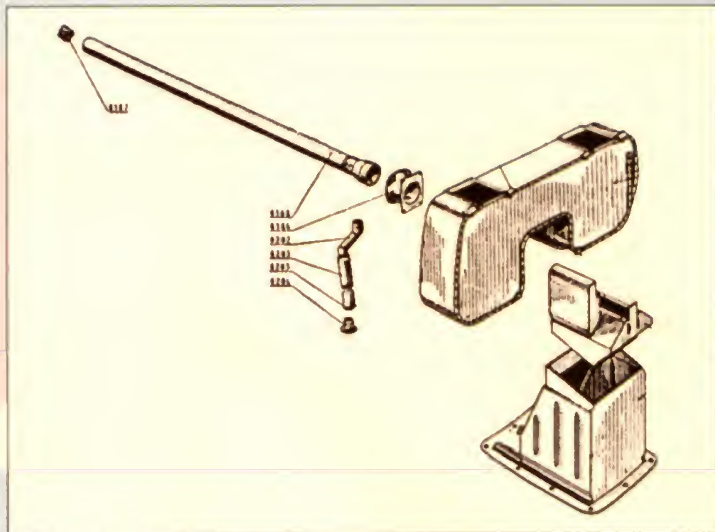
The tailplanes are simply butt jointed into place and some care is needed to make



Detail of the propeller and spinner during construction, showing how a length of plastic tube has been installed to locate the propeller in the centre of the spinner



Both the bottom edges and the top surface of the wheel well insert have to be filed back to allow the insert to fit flush and the top and bottom surfaces of the wing to meet



Motor cannon and ammo boxes

sure that the facing edges of the tailplanes are finished square else they'll be out of alignment with the wing.

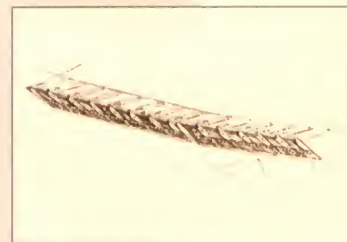
I elected to complete the painting of the model at this stage and finished the canopy in a closed position due to my uncertainties about the cockpit interior. Other minor items had to be added at this stage of construction. Kit parts included the injection moulded plastic aerial mast and the cast resin 'DF' loop, while some scratch additions included the Pitot head (mentioned in the instructions without any dimensional indications), a small aerofoil fairing just behind the tail-wheel well and a small projection just in front of the aerial mast. See the accompanying photos for more details on these points.

Colour pointers

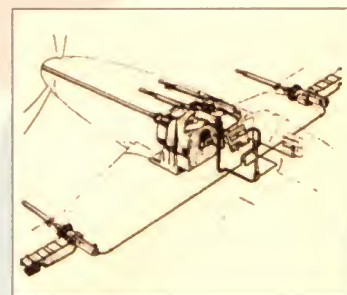
Two finishing options are given in the kit, both from the II Grupo Caccia at Cascina Vega in early 1944. An aircraft from the 1^o Squadriglia is finished in an experimental three colour splinter camouflage of sand, green and brown while one in the 2^o Squadriglia is in the more common RLM 74/75/76 scheme. I elected to model the experimental scheme as it would make an unusual addition to the handful of Italian fighters I have on my shelves.

Although the colour details in the kit do give FS numbers I do not have a federal standard book, so worked from the descriptions and made use of the AeroMaster range compiled for modellers of Italian aircraft. For the underside I used No.1210 Grigio Mimetico while the tri-colour upper surfaces were completed in No.1216, No.1212, and No.1217, which were translated as Giallo Mimetico, Verde Mimetico and Bruno Mimetico. However, it has to be said that apart from the brown all of these colours have options available. There is a lighter version of the green (No.1213) and of the underside pale grey called Grigio Azzurro (No.1211) both of which in hindsight I think may be more appropriate. There is yet another version of the pale brown described as Mocciola Chiaro (No.1215) which translates as 'hazelnut', and I shall cheerfully leave debate to those better qualified than myself.

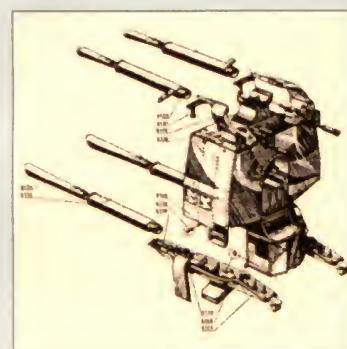
When completed the model does present a striking representation of a unique experimental camouflage scheme,



Flaps



Machine gun armament



Ammo boxes and blast tubes

which was prepared for the application of the decals with a coat of Klear floor polish. Adding the decals was a very swift process for there are only a few on the small sheet. These are however some of Microscale's finest and feature very dense colour, with even the white being extremely opaque. They settled into place very nicely with the use of Microsol and Microset decal solutions, and the final stage was a coat of Testor's flat acrylic varnish from their new range of 'bagged paints'.

The undercarriage is not one of the kit's better points, for it's an injection moulded affair and the legs lack definition. The 'retraction struts' are simply cast resin rods and do not have any of the detail one

The Modeller and the Internet

by Martin Elcox

Many of you will be aware of the old teaching adage, first you tell them what you are going to tell them, then you tell them, and finally you tell them what you told them. Well, not to be conformist, let me tell you what this isn't! This article is not meant to be, nor could it ever hope to be, an exhaustive guide to the Internet for modellers. It is purely an introduction to what it has to offer.

The Internet!, I hear some of you say, what's that when it's at home and what on earth does it have to do with modelling? Well the Internet, the 'Information Super Highway' or just 'The Web' or 'The Net' as it is also called, originated in the USA as a network of computers for the academic and military worlds and has grown into one of the major information resources the world has ever seen. In April 1998 the New York Times estimated that there were approximately 320 million pages of information that are just sitting there waiting for people to access them. This access or 'browsing' in jargonese, is now what goes by the rather romantic title of 'Surfing the Net'. But be careful, once you start and get hooked, remember to leave some time for the modelling. It is very easy to let the Web take over, with favourite pages, discussion groups, news groups etc. You can very easily become addicted to sitting and looking at a 15 inch square piece of glass.

There is no doubt the Internet is taking over, just watch the adverts on television, how many of them have that little phrase on the end shot "www.buymeorelse.co.uk" or something similar. Should you require even more evidence, look at the bottom of the advertisements in this magazine and see how many of the traders state a website address or can be contacted by e.mail (Electronic Mail).

Now we have the last technospeak in this article. I promise. The www. etc etc, is what is known as a URL (Uniform Resource Link), in other words it is the 'House number and Post Code' for the piece of information that you are trying to access. So just as the Post Office will be able to deliver a letter by using the postcode, you can access a web site by entering this code into your computer. Using the same analogy, the letter gets delivered to the house, but only

when you get to the house and open the door do you see everything that is inside it. The same with the web, once you enter your URL and the site is found, you, then delve deeper into the site by clicking on links displayed to you on the screen. Be aware though, that all web addresses don't necessarily start with 'www', as you will see later in this article.

Don't worry, however, if you don't know the address of a site, or even if a site on the subject you are researching actually exists. The web contains many 'search engines'

(OOP's another promise broken), and I prefer to use Yahoo or Alta Vista. By entering your keywords into the search field, these engines will give lists of the available sites or pages that contain information that match your search criteria. You will soon learn to refine your searches to more

specific words. As a matter of warning, don't just search on models or modelling, the last time I did this I was presented with 4,707 pages pertaining to 'models', most of which are nothing to do with our hobby and unfortunately those in this society that prefer to use the web for so-called 'glamour'

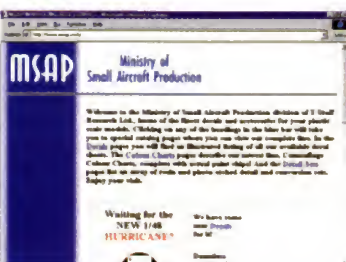
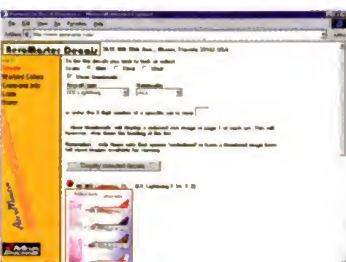




may well invade your PC.

So, just as we have seen a transformation in the after market world of modelling accessories and add-ons through the introduction of high tech manufacturing techniques, with computer-generated brass etchings and the like, the web will revolutionise the way that modellers locate and retrieve information for things like reference material, buying models and club membership. How many of you know that you can talk to the Membership Secretary of IPMS(UK) via e-mail, or even just display to the world the latest masterpiece to exit from your very own Skunkworks?

Anyway, enough of the preamble, let's get down to business. For the sake of clarity, I will try to break this article down into three main sections: Modelling sites, Reference Sites and Newsgroups. At the end of the article I will list a number of websites that you can visit. Please remember that the web is always in a state of flux and what might be there one day, might have been deleted the next.



Modelling Sites

"Search and ye shall find".

There are plenty of sites on the web which are dedicated to modelling or have a serious modelling content. These range from the individual who has his or her own site and uses it to display their own craftsmanship, to the larger manufacturers who display their own product ranges and all the information that you need. Kendall and Testors, from the US, are just two of these. Most of the major Japanese companies also have websites, but unfortunately most of these are in Japanese and their only real use is to look at the images that they contain, Japanese text does not convert well to Western computers, so all you will see is a series of strange geometric shapes and lines. Closer to our shores, and I apologise for going slightly out of subject, Accurate Armour is an example of an UK company with an impressive site.

It would be impossible for me not to dwell on the sites run by model clubs and societies, as these contain a wealth of information for the modeller, no matter what standard they are. I am sure that everybody is aware of the IPMS as a society, though how many of you know about the IPMS(UK) web site: find it at www.users.globalnet.co.uk/~ipmsuk. This site contains all the information you need to know about your membership with IPMS(UK), how to contact the committee members, and how to make use of the various services that are provided, like the Decal Bank. More importantly though it is your way of seeing what is happening within the society, what the plans are for the next Nationals; the Millennium celebration! The site is well constructed and easy to use, even having a section for Junior members, who after all are really the new computer generation.

Visiting these sites is also a very useful springboard into the depths of the web.

Most 'webmasters', a posh term for the 'propeller heads' who put the pages together, include a section of links to other sites. From the IPMS/Albuquerque Modellers website in the US,

<http://tacair-press.com/asm.shtml>, you can follow links to a whole multitude of sites, which are categorised for you into modelling sites, research sites, IPMS sites, and so on. From our own IPMS(UK) site you can follow links to commercial sites as well as seeing which SIG's (Special Interest Groups) have their own websites or at least can be contacted via e-mail. Importantly this also gives you a link to Tony Matteliano's Scale Model Bookmarks, the website of a US-based modeller who has listed every modelling related site that he can find. The address for this site is www.buffnet.net/~tonym/models.htm

In fact between these two IPMS sites that I've mentioned, you probably won't need to use any search engines at all. Not bad for the cost of a local phone call.

A new site which I am sure will be of great benefit to modellers worldwide, is run by a Canadian, Jean-Marc Perrault. His site, <http://www.zercom.net/~jmarcp/> is literally a spare parts site, where modellers can

to a certain extent, to finish our models to our own personal taste. Can you imagine going to the Nationals and seeing a display of a particular type of aircraft, where they are all finished with the same markings! The only problem with the decal sheets, is knowing what they look like, unless you can get along to a stockist and look through them all, or remember which edition of SAMI they were reviewed in. Just looking at long lists of decals and contents descriptions, makes it very difficult to know what the decals, and therefore the final finish of your model, will be.

One of the major after-market decal manufacturers is AeroMaster, based in Miami Florida. Their website,

www.mustangone.com/aeromaster, lets you look at the sheets on the screen of your PC. You select the aircraft type, the scale and nationality in an internal search facility, the result of which will be listings accompanied by images of the decal sheets, thumbnails or full size, of the decals available for that particular aircraft. For example, if like me, your shelves are full of Airfix 1/48th Lightnings and you are looking for some of the more colourful paint schemes that the Lightning carried, this site can help you



request spare parts for almost any model. If they have it, they send it to you and all you pay for is the postage. If they haven't got the bit you are looking for, they list it on a page, so that other modellers can see what is needed and donate if they have it. A bit like the decal and instruction bank run by IPMS(UK).

We all know of the increase in the after-market accessories, and some of us have come to rely on this to save time to correct inaccuracies in the mass produced model, instead of getting out the plasticard and scratch building the new nose etc. One of the biggest areas of this and certainly the most colourful is the plethora of decal sheets that are now available, enabling us, to

choose the decals that you need to produce that special model. This then is a good way of viewing the merchandise at home before going out and buying!

Reference Sites

There isn't really enough space in the magazine to do justice here, but here goes. It is fair to say that you could almost find any bit of reference material that you want. Obviously we are interested here in aviation material and once again we have sites created by the aircraft manufacturers, Boeing, Dassault, Lockheed Sikorsky, Westland, etc. etc., all of which contain impressive information about the aircraft that they build, and of greater use to us

modellers, most of them have archive material giving manufacturers dimensions

countless pages just to see one picture. If you are lucky, the subject matter makes up

markings aren't your cup of tea, but the F-16 definitely is, you may well have heard of Peace Falcon and Peace Vector. These were the American projects which supplied F-16s to Jordan and Egypt, so if you fancy doing a brace of F-16s in Arab markings then you need to go to the site at:-

http://allserv.rug.ac.be/~svhastel/f16/users/f16_user.htm. This is the 'Three-Four-Nine' site, edited by Lieven Dewitte and Stefaan Vanhastel, and is the most comprehensive site on the F-16 that I have found. It lists in detail all the users and the history of service with each country going through all the development phases and the builds, the avionics, in fact all the F-16 related matter that you can think of. It is liberally filled by good photographs, over 250, so if you do fancy that Jordanian F-16 this is the place to go.

Keeping to an international theme, and as an example of another good official site, is the website of Fighter Squadron 21, Finnish Air Force,

Chieftains and Arrows, which are used by the Finnish Air Force for liaison duties.

Closely linked to this site, is the website of the Finnish Fighter Tactics Academy (FTA), <http://www.sci.fi/>

Again this is filled with large amounts of fascinating reference material for the modeller and not all of the content is specifically about modern Finnish aircraft. Here you can see lots of information and photos of Brewster Buffalos, so Tamiya fan, will once again be very happy. You may also remember five years ago during the 50th Anniversary of D-Day celebrations, that many modern allied aircraft carried special markings, and a few of the leading model manufacturers reproduced models with these markings; well the FTA site has a superb set of photos of CF-18s taken by Mike Reyno, including a stunning image of a 441 Sqn RCAF F-18 in D-Day markings.

Newsgroup & E-Mail

As an Internet user, you can subscribe to



for aircraft, a must for any reviewers in the audience. If you like special paint schemes, there are some superb images of Phantoms in the Boeing archive. Hands up all of you who bought the Tamiya Skyraider, now keep your hands up if you know about the Official A-1 Skyraider website, an absolute must for any Spad enthusiast. You can find it at <http://skyraider.org/>. This is actually two sites in one and here you can even view the flight manuals, see the weapons loads, as well as plenty of images of dirty battle-hardened airframes; an absolute gem for the serious modeller. This site is run by individuals associated with the aircraft like many other sites run by enthusiasts. These provide access to unlimited amounts of photographs and plans to provide the modeller with an unbeatable supply of material.

A prime example of this type of site, can be found at www.ndirect.co.uk/~rt.jackson. This site is the photographic collection of A. J. Jackson, which lists thousands of negatives and photographs of aircraft going back to the very early days of aviation in the UK. The subject matter is mainly British Civil Aviation during the years 1919 to 1960 but there are also details and photographs of many military and foreign aircraft. The collection is managed by his son R.T. Jackson, who also writes a monthly feature in Air Pictorial magazine.

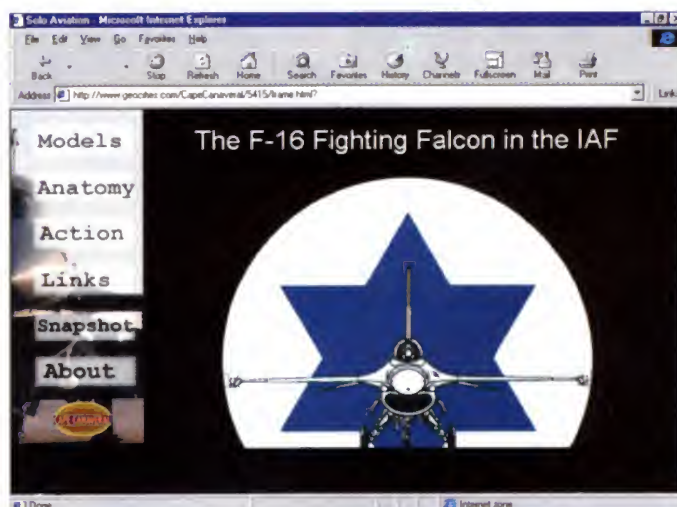
Although the site does not display the actual images, for a small fee plus postage, a copy of the required image will be sent to you. Although Roger doesn't run the service as a full-scale commercial venture, it is still a very valuable resource of non-readily available references. This then is really useful for the modeller who has a specific aircraft in mind with a particular set of markings, and therefore should give you the background information to authenticate the finish.

Of course, not all the websites make it easy for you to find reference material. Occasionally you will have to trawl through

for this long distance route, one of these is the website of the 'Hurricane Hunters', or to give them their proper name, the 53rd Weather Reconnaissance Squadron of the US Air Force Reserve. This is a unit that deliberately flies modified WC-130 Hercules into the middle of hurricanes. The website has plenty of outstanding photos and just the one that I was looking for at the time.

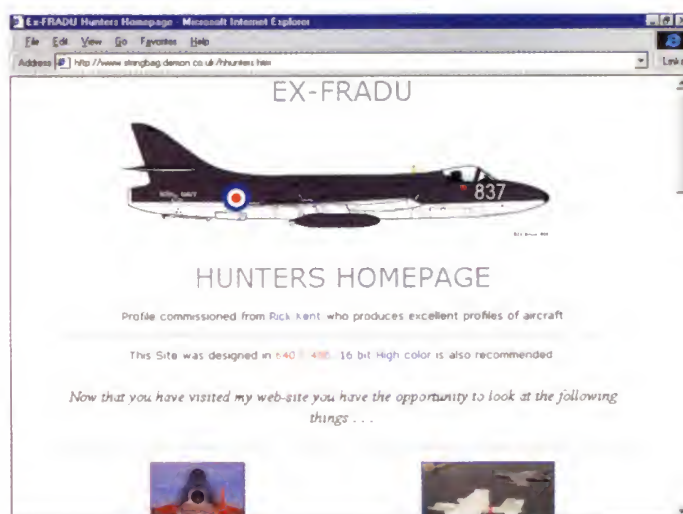
There are official sites and unofficial sites, the difference being that official sites are built and managed by the organisation themselves, like the Hurricane Hunters site. Unofficial sites are normally compiled by individuals who have an interest in a particular subject, for instance:-

www.geocities.com/CapeCanaveral/5415/frame.html. This site, created by Tsahi Ben-Ami, is dedicated to Israeli Air Force F-16 Fighting Falcons. As most of you are well aware, the F-16 has been produced by most of the major model manufacturers and is well catered for by the after-market decal manufactures. For those of you wishing to finish your model in Israeli colours, this site provides a wealth of information about the type in Israeli service. If perhaps Israeli



<http://www.mil.fi/ftrsqn21/> It contains many excellent photos of F-18s and BAe Hawks in Finnish markings, or if you are into making models of light aviation aircraft, there are even pictures of Piper

one of many newsgroups. These are basically group discussion forums which enable you to have a conversation about any given subject, with like-minded individuals. It is a great way to air your views about the latest models, but it's real value is when you need help on a particular model, or with a particular technique. These groups almost have a language of their own, so don't be put off about being a 'Newbie' when you start to participate. There are plenty of ways to get to the newsgroup of your choice, and certainly the information that comes with your browser or from your ISP (Internet Service Provider) will help. One way is to go through the DejaNews website which can be found at www.dejanews.com/. This site enables you to view the discussion groups, follow and view the whole conversation thread, and perform very comprehensive searches on the different newsgroups. You can search by subject, author, date and so on. The best modelling group that I have found is Rec.Models.Scale. This group is not confined to just aviation modelling, but as the title suggests to scale models in general,



though it is normally plastic kit oriented. There are other news groups, so again it is a question of looking through what is available and making your own choice as to what is good for you.

We also need to mention e-mail, an excellent way to send and receive information. Hannants send an e-mail to about 1,500 people, giving the new models that have been received and more importantly the price. So if you don't have time to trawl through model shops, or you have seen the review in this magazine and can't wait to find out when you can get it, this is the service for you.

As a modeller, I now find e-mail invaluable, as I can send a request for information to a variety of places. This also makes it easy to reply and manage when the reply comes back. As an example of using newsgroups and e-mail, I posted a request to the Rec.Scale.Models newsgroup for information on the US Coastguard use of the Dauphin, or the HH-65A Dolphin as it is known in USCG service. The request was picked up by a serving USCG Chief Petty Officer, and over the next few days he sent by e-mail loads of photographs that I would not have been able to get anywhere else.

John I owe you one.

This then I hope gives you a small snapshot of the material that is available on the web. Again let me stress that I am not trying to give you an exhaustive guide to what there is on the web, but hopefully just to open your eyes to the possibility. After all, how else could you look at reference material in the US, New Zealand, Israel, and in Finland, then back to the US or Japan to see the latest release and then to look in the UK to see the ideas for the Millennium nationals, all for the cost of a local phone call (if you are lucky - Ed!), in such a short space of time and without leaving the comfort of your own home! If you manage a website and I haven't mentioned it, or listed it below, please accept my apologies, but you will know the web is just too big to cover fully.

Happy surfing, but please remember to leave time for the modelling.

Martin Elcox

Acknowledgements.

I would like to thank the following for their assistance with this article:

Jarmo Lindberg, John Wilson, Roger Jackson, Spad Guy, Michael Benolkin, Tsahi Ben-Ari (aka Solo), Nigel Hannant, Nick Allen and all the other webmasters whose sites I visited whilst researching this piece.

Model Manufactures

www.academy.co.uk/main1e.htm
www.accurateminatures.com*
www.aoshima-bk.co.jp
www.dragon-models.com
www.ertltoys.com
www.wbs.or.jp/bt/models/hasegawa/
www.hobbycraft.com/team.html
www.admix.co.jp/~lmai/index.htm
www.italeri.com
www.msap.com
www.webtownis.bc.ca/modelcraft
www.mpm.cz
www.revell-monogram.com
www.reveli.de
www.tamiya.com
www.testors.com

Academy
Accurate Miniatures
Aoshima (Japanese Only)
Dragon
ERTL
Hasegawa (Japanese Only)
Hobbycraft
IMAI (Japanese Only)
Italeri
Ministry of Small Aircraft Production
Modelcraft
MPM
Revell-Monogram
Revell Germany
Tamiya
Testors

After Market Accessories and Tools

www.aeromaster.com
www.mindspring.com/~transferman
200.23.238.36/aztec
www.mondenet.com/~belcher
www.concentric.net/~Theocoles/cobra.html
www3.glo.be/daco
www.dekno.com
www.eduard.cz
www.clever.net/dtk/com/experten/experten.html
www.tbaytel.net/ldccs/decp2.htm
www.jaguarmodels.com
www.kmciami.com
www.pci.on.ca/~macnamar/ipms/leading_edge.html
www.lonestarmodels.com
dspace.dial.pipex.com/town/place/gfb78
www.modelspot.com/neomega/neomegahome.htm
www.clever.net/dtk/com/paragon/paragon.html
www.skylancercalcs.com/
www.dhinc.com/superscale/
www.elements.nl/verlinden/indexEN.html
www.verlinden-productions.com/
www.vls-vp.com
www.artproducts.com/mweb/badger.htm
www.gremlins.com/bmf
www.dremel.com
www.flight.demon.co.uk
www.freenet.edmonton.ab.ca/gryphon/index.html
www.clever.net/dtk/com/snj/snj.html

AeroMaster
Archer Fine Transfers
Aztec Decals
Belcher Bits
Cobra Company
Daco Products
Dekno
Eduard Model Accessories
Experten Decals
Flightdecs
Jaguar
Kendall Model Company
Leading Edge Models
Lone Star Models
MDC
Neomega
Paragon Designs
Skylancer Decals
Superscale International
Verlinden/Main
Verlinden Productions USA
Verlinden/USA
Badger Airbrush
Bare-Metal Foil
Dremel
Flexi-Light
Gryphon Models
SNJ Model Products

Modelling Sites

www.ping.be/~ping1076/ipms/ipms.html
www.ping.be/ipms-belgium*
www.ipmscanada.com*
personal.eunet.it/pp/vmhalm/ipms/home.html
www.multimania.com/ipmspdf/index.htm*
http://www.i-france.com/ipms-france*
www.0line.it/civ/ipmsni/*
ping4.ping.be/~pin15471/index2.shtml*
www.geocities.com/CapeCanaveral/Hangar/1375/
mailto:ipms_singapore@yahoo.com mail for
www.remotecom.se/ipms
www.kimberley.co.za/ipmsa*
www.ipms.ch/
www.users.globalnet.co.uk/~ipmsuk/
www.ipmsusa.org/
tacair-press.com/asm.shtml
www.index.net/novamodeler/
prmts.webace.com.au/
www.users.globalnet.co.uk/~garys
ourworld.compuserve.com/homepages/geoff_trenholme
www.almanac.com/aviation/bearcat/index.html
www.almanac.com/aviation/86f/detail
www.aaasig.org
users.atcom.com/~hawker/hawker.htm
www.geocities.com/CapeCanaveral/2874
members.aol.com/cobra6/rotorwash.html
www.acm.cps.msu.edu/~kortasma/spitfire.html
dialspace.dial.pipex.com/town/estate/hr49/usnafr/
www2.magmacom.com/~tre/taadecol.htm
www.swan.ac.uk/mateng/gavins/refs.htm
Conversions)
www.j-aircraft.com/
members.aol.com/billbayer/kcchome.htm
www.kitmaster.mcmail.com/index.htm*
www.copetel.com.ar/webs/marber/
www.teist.com/~downer/
www.schifferbooks.com/military/
www.zercom.net/~jmarcp/
www.buffnet.net/~tonym/models.htm

IPMS Branches
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IPMS North Virginia
Perth Military Modelling Society
Aerotic Display Teams SIG
Czech & Slovak SIG
F8F Bearcat Memorial
F-86F Modelers Detail
Fleet Air Arm SIG
Hawker Hurricane
MIG Alley
Rotor Wash
Supermarine Spitfire
US Naval Aircraft SIG
Commonwealth Naval Aviation
Gavin's Paint Charts (Paint
Japanese Aircraft & Ship Modelling
Kit Collectors Corner
Kitmaster Collectors
Personal site of Eduardo Enrique Marber
Modeler's Home Page
Schiffer Books
The Official Parts Yard by Jean-Marc Perreault
Tony Matteliano's Scale Model Bookmarks

Aircraft-Specific Sites

skyraider.org
members.aol.com/A6E/intruder.html
cust2.iamerica.net/blade
www.b24bestweb.com
www.myring.demon.co.uk/beau/
cellmath.med.utoronto.ca/B47/Bell_47.html
www.spectrumwd.com/c130/index.sht
www.stringbag.demon.co.uk/hunters.htm
www.js-net.com/phantom/phantom.htm
tacair-press.com/research/northrop.shtml
studwww.rug.ac.be/~svhastel/
www.geocities.com/CapeCanaveral/5415/toff.html
www.uta.fi/~nz55955/hornet.html
www.mil.fi/ttrsqn21

A-1 Skyraider Site
A-6 Intruder
A-10 Warthog
B-24 Liberator
Beaufighter Squadrons
Bell 47
C-130 Hercules
Ex FRADU Hunters home page
F-4 Phantom Site
Northrop F-5E/F & F-20
349 Squadron F-16 Site
F-16 Israeli Website
F-18 Hornet
F-18 Hornets of Fighter Sqn 21 Finnish Air Force

tacair-press.com/research/hun.shtml
www.ecn.net.au/~sheeran/1-111.html
tacair-press.com/research/huskie.shtml
www.lightning.org.uk/
www.geocities.com/CapeCanaveral/8280/helis.html*
www.geocities.com/CapeCanaveral/8663/index.html
gramercy.ios.com/~tkraft/mig.htm
www.mrygale.org/04/mteiten/m22titre.htm
www.mrygale.org/04/mteiten/mf1titre.htm
www.navy.mil/homepages/viking/
www.skyhawk.org
www.eracer.org/hangar_html/spitfire/spitlink.htm
www.stringbag.demon.co.uk/
www.geocities.com/Pentagon/7002

F-100 Super Sabre
F-111 Page
Kaman HH-43 Huskie
Lightning Web site
MD500/OH-6 Web Site
Messerschmitt Me 262
MiG-21
Mirage 2000 site
Mirage F1 Site
S38 Viking Community
Skyhawk Association
Spitfire Links around the World
The Stringbag Sites
Thud Ridge (F-105 in Combat)

Air Power Reference Sites

www.army.mod.uk
www.mat.ufpr.br/~rudnei/FAB/english.html
www.hkdk.fi/~jyrola/war/fat/fat.html
www.geocities.com/CapeCanaveral/8497
www.hellas.org
www.bharat-rakshak.com/IAF
www.cae.wisc.edu/~wei-bin/homepage.html
www.jda.go.jp/jasdt/indexE.htm
www.geocities.com/Pentagon/2815
www.raif.mod.uk
www.adfa.oz.au/DOD/RAAF
www.acq.dnd.ca
www.euronet.nl/users/woklu
www.canit.se/%7Egriffon/aviation/
www.mindof.gov.sg/rsaf*
www.af.mil
www.usaf.af.mil
www.uscg.mil/images/photos/

British Army
Brazilian Air Force
Finnish Air Force
Guatemalan Air
Hellenic Air Force
Indian Air Force
Israeli Defense Forces
Japan Air Self Defense Force
ROC (Taiwan) Air Force
Royal Air Force
Royal Australian Air Force
Royal Canadian Air Force
Royal Netherlands Air Force
Swedish Air Force
Singapore Air Force
United States Air Force
United States Air Forces Europe
US Coastguard

Museums

www.rafmuseum.org.uk/fat/cosford/
www.avdigest.com/aahm/aahm.html
www.users.mwark.com/arkaimuseum
www.motor-software.co.uk/brooklands/index.html
web.idirect.com/~cmft/index.htm
www.aviation.nrmst.ca
www.warplane.com
www.mae.org
www.nasma.com
www.naval-air.org
nzfpm.dcc.govt.nz/nzfpm/nzfpm.htm
www.rafmuseum.org
www.mainstream.com/rhinebeck.html
www.nasm.si.edu
esu3.esu3.k12.ne.us/districts/raistor/ms/sac.html
www.wpafl.af.mil/museum

RAF Museum, Cosford
American Airpower Heritage Museum
Arkansas Air Museum
Brooklands Museum
Canadian Museum of Flight
Canadian National Aviation Museum
Canadian Warplane Heritage Museum
Air & Space Museum, Le Bourget, France
National Air & Space Museum of Australia
National Museum of Naval Aviation
New Zealand Fighter Pilots' Museum
RAF Museum, Hendon
Rhinebeck Aerodrome Museum
Smithsonian National Air and Space Museum
Strategic Air Command Museum
United States Air Force Museum

Aircraft Manufacturers

www.airbus.com
www.bae.com
www.boeing.com
www.cae.wisc.edu/~wei-bin/homepage.html
www.eurocopter.com
www.lmco.com
www.lmsw.external.lmco.com/lmsw/
www.lmco.com/photo/a-z.html
www.northgrum.com
www.raytheon.com/rac
vanguard.sikorsky.com/index.html
www.x-cd.com/westland

Airbus Industrie
British Aerospace
Boeing Company
Dassault Aviation
Eurocopter Consortium
Lockheed Martin
Lockheed Martin Skunk Works
Lockheed Martin Photo Archive
Northrop-Grumman
Raytheon Aircraft
Sikorsky
Westland Helicopters

Photographic Sites

www.ndirect.co.uk/~rt.jackson
users.aol.com/james27/hart/hart.html
www.totavia.com/imagearchive
www.dtrc.nasa.gov/
www.compulink.co.uk/~panic/
mypage.direct.com/mv/martin11/

A J Jackson Photographic Collection
Aircraft Nose Art
Aviation Home Page
NASA/Dryden Research Aircraft Photo Archive
Paul's Plane Page
Martin Slides (RCAF and others)

Other Military Aviation Sites

www.carnut.com/mylinks/aircraft.html
www.dm.af.mil/amarc/default.htm*
www.avhome.com
www.cae.wisc.edu/~wei-bin/homepage.html
www.nol.net/~sluggo
www.clark.net/pub/roytc/ru_acft.html
aeroweb.lucia.it/~agretch/RAP.html
www.dhc.net/~weasels
www.vpnavy.com/
www.vpnavy.com/raaf.html
www.vpnavy.com/models.html
www.hurricanehunters.com
www.quokka.com/ema/hcs-5/HCS-5 Firehawks
www.classicjets.co.za/
collectorsnet.com/milhist
www.fgi.net/~rdoughty/tw.html
home.worldonline.nl/~cschoute/home.html
www.texaslink.com/vf201/
www.mindspring.com/~total_health/38trs/38trs.htm
www.geocities.com/CapeCanaveral/Lab/4596
www.toledge.com/panels/aircraft/sites/kopack/

Aircraft Links
AMARC
Aviation Home Page
Aviation Resources
Luftwaffe Fighter Page
Roy's Russian Aircraft Resource
Russian Aviation Page
Wild Weasel Homepage
US Navy Patrol Squadrons
RAAF Maritime patrol Squadrons
VP site directory of Model Aircraft
53rd Weather Reconnaissance Sqn USAF
US Navy HH-60H Sqn
Classic Jets South Africa
8th Air Force in World War II
12th Tactical Fighter Wing
32nd TFS Association
VF201 US Navy Tomcats
38 TRS Homepage
50 FW/Hahn AB
Phantom Productions

Baltimore to Martin A-3

Baltimore to Martin A-3- Baltimore Mk III/IV/V
Price: £7.95 (+P&P)
Publisher: Finatex A.E. Greece
Tel: (01) 9571206 **Fax:** (01) 9519566
Email: finmedia@athena.compulink.gr
UK Source: The Aviation Bookshop, 656 Holloway Road, London, N19 3PD
Tel: 0171 272 3630 **Fax:** 0117 272 9761

This title offers 35 pages in an A4 landscape format with a laminated card cover.

The text within this title is all in Greek, and I am afraid there are no English photo captions etc. The main of the title is well illustrated with period black and white photographs and these are backed-up with diagrams from the official manual and colour artwork of the interior etc. There are

three good colour side-views in the centre pages, along with four scrap views showing additional noseart details. These are followed by a good colour plan-view showing the camouflage pattern used on the type. At this stage you reach five pages of colour interior artwork of the Baltimore, and these will be of great interest to modellers as there is not a lot available on the type. The final item of note is a listing of Mk III, IIIA, IV and V machines with their serial number and individual squadron letter, which is included on the inside back page.

Overall this is a good title which will be of use to those of you with an old Frog kit in the pending pile. The inclusion of the interior artwork makes this a title that many



will want, but it is a real shame that the text is all in Greek (unless you are Greek!), as I am sure that the details contained within

the text would have been of interest as well.

Our thanks to The Aviation Bookshop for the review sample.



MiG-15

MiG-15
Price: £6.95 (+P&P)
Publisher: AP-M, Russia
UK Source: The Aviation Bookshop, 656 Holloway Road, London, N19 3PD
Tel: 0171 272 3630 **Fax:** 0117 272 9761

This title comes in an A4 landscape format with 82 pages of contents and a card cover.

Once again the main text is not English, although all the photographs have an English caption which is useful. There is a very short summary about the book's contents at the beginning, but I am sure the rest of the 80 pages of text would hold a lot of information that would be of great interest to many modellers. That said the title holds a mass of period black and white photographs and these include such things as the ejection seat (brand new 'factory' photos), details of the engine installation, the nose and main wheel wells, air brakes, gun packs and a

mass of clear cockpit interior shots.

The latter items even include those for the two-seat versions. There is a good set of 1/72nd scale plans of the MiG-15bis included and there is good coverage of the Toriy-A radar equipped version (along with more interior photographs).

There are a number of good photographs showing in-flight refuelling tests with a MiG-15 and Tu-4, as well as complete coverage of the cannon and ordnance carried by the type. As already mentioned there is good coverage of the two-seat version and these include 1/72nd scale plans of the MiG-15UTI.

There is no colour in this title except the cover and within the inner front and back pages of this there are eight colour side-views of MiG-15's.

This is a good title, with a mass of detail information that many modellers will find

of great assistance. The lack of English text is a shame, but overall I think that this title still has a lot to offer just in terms of interior information.

Our thanks to The Aviation Bookshop for the review sample.



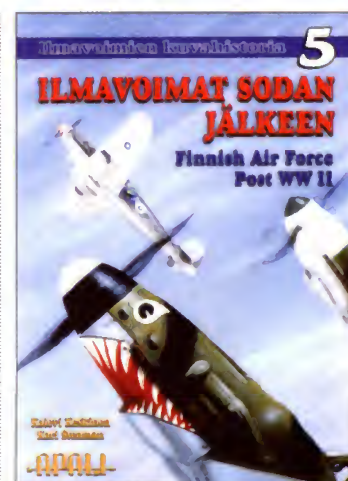
Finnish Air Force Post WWII

Finnish Air Force Post WWII
by K. Keskinen & K. Stenman
Price: £TBA (199MK)
Publisher: APALI OY, Sammonkatu 64 A, 33540 Tampere, Finland.
Tel: +358 3 2552 466
Fax: +358 3 2552 899
Source: Aviation Shop, Kalamuksenkatu 12, FIN-00250 Helsinki, Finland.
Tel: +358 (0)9 449 801
Fax: +358 (0)9 149 6163
Email: shop@aviation.fi

This title comes in an A4 format with 160 pages and a hardback cover. The vast majority of the coverage within the title is in black and white, but there are eight pages of colour towards the back.

The text within the title is in Finnish, but basically the title is a mass of large, clear, period photographs with extensive captions in both Finnish and English.

The level of coverage is excellent and, as already said, the photographs have been printed large with one or two per page. Coverage starts with the Bf 109G(49 pages), Pyörremyrsky PM-1(2 pages), Buffalo (4 pages), Fiat G.50 (1 page), Morane Saulnier MS.406 (5 pages), Curtiss Hawk 75 (6 pages), Myrsky (6 pages), Fokker D.XXI (4 pages), Blenheim (8 pages), Dornier Do 17Z (3 pages), Pe 2 and Anson (1 page), Junkers Ju 88A (2 pages), DC-2 (4 pages), Junkers F-13 (2 pages), Fokker C.X (4 pages), Lysander (1 page), Fi 156 (1 page), VL Tuisku and Viima (10 pages) Fw 44 (1 page), VL Pyry (12 pages), Vihuri VH-1 (14 pages) and a couple of others.



The last pages before the colour section are a brief summary of the narrative at the front of the title, in English, and this is followed by a chart listing the locations of the squadrons from April 1945 to January 1957.

The colour section completes this title and offers eight pages. The first four are period shots showing such things as the Fw 44, Bf 109G, Myrsky and Pyry. These are followed by eight pages of colour side views depicting twenty aircraft. These include ten Bf 109s, Fiat G.50, Curtiss Hawk 75, three Pyry, M.S. 406, Myrsky, Buffalo, Fokker D.XXI and Fokker C.X.

This is a stunning title and one which we can highly recommend to all. I suspect that the UK price may be a little high due to the

'limited' appeal of the subject matter, but the photographs and information contained within it are a real must for any Finnish Air Force fan.

Our thanks to Aviation Shop Kuvasto for the review sample.



Fokker Fighters D.I - IV

Fokker Fighters D.I - IV

by P.M. Grosz

Price: £16.00

Publisher: Albatros Productions Ltd, 10, Long View, Berkhamstead, Herts, HP4 1BY
Tel: 01442 875838 Fax: 01442 876018

This is the second in the 'Classics of WWI Aviation' series and it comes in a 52 page A4 format with a laminated card cover.

The narrative text within this title looks at the development and use of the early Fokker fighter designs which were, to be truthful, not very good. From early experiments with the M 16, M 17 and M 18, to the development of the latter into the D.I, all set the scene. This is followed by a look at the D.I, the M 17 into the D.II, M 19 into the D.III and the M 21 into the D.IV. Each of these sections is backed up with a mass of period black and white photographs, many of which have not been published before. As always each of these types has a complete set of 1/72nd scale plans included and these have been redrafted to incorporate new information discovered by the author.

The latter section of the title includes a detailed look at camouflage and markings of each type and this is followed by

Fokker Fighters D.I-IV



appendices which list D.I - D.IV acceptance rate, front line inventory, production orders and a full set of specifications. As with all

Albatros titles the inner pages of the front cover contain colour side-views of, in this case, seven machines. This is another good title from Albatros and one which can be recommended to all WWI fans.

Our thanks to Albatros Productions Ltd for the review sample.



Silvered Wings

Silvered Wings

by Gordon Bain

Price: £24.95

Publisher: Airline Publishing Ltd, 101 Longdon Road, Shrewsbury, Shropshire, SY3 9EB
Tel: 01743 235651 Fax: 01743 232944

This title comes in an A4 format with 144 pages of contents and a hardback cover with full-colour dust jacket.

This title is basically a large collection of high quality colour photographs taken by Gordon Bain. Each image is produced in a large format, with just one per page with a little narrative caption for each. The subjects covered are, of course, of aircraft that are, or have been, airworthy in about the last twenty years.



The subjects covered range from the D.H.60 to the Dassault Mirage. The scope of the coverage is excellent and ranges from military to civil types, as well as the odd 'airliner' in the form of the Comet and the Herald. Aircraft in the UK, as well as Europe and America are covered and the whole title is one of those lovely collections of images that you look through during a 'search for inspiration' between modelling projects!

Highly recommended to all modellers and aviation enthusiasts.

Our thanks to Airline Publishing for the review sample.

Walk Around - A-10 Warthog

Walk Around - A-10 Warthog

by Ken Neubeck

Price: £12.99

Publisher: Squadron-Signal Publications, 1115 Crowley Drive, Carrollton, Texas 75011-5010, USA.
Tel: 214 242 1485
Fax: 214 242 37 75
UK Importer: Pocketbond Ltd

This is the latest addition to the popular 'Walk Around' series and it comes in the usual 80 page A4 landscape format with a laminated card cover.

Photographic coverage is the key in this

series and in this title it is split 50/50 between the black and white and colour images. All areas of the airframe are covered in great detail. The cockpit interior is shown, along with good photos of the ACES II ejection seat. The massive cannon carried by the type is, of course, also well covered and this includes ones both installed and removed from the airframe.

The single-point refuelling system is well covered, and many modellers will find this of use in adding a bit of additional interest to their model. Scale plans (1/72nd) are included, along with twelve colour side-views towards the back of the title.



The use of the A-10 during the Gulf War is featured, and along with some photographs of damage inflicted to A-10s during the war, there is also a great amount of the artwork etc carried by them at the time.

This is another good title in the series and a 'must' for any A-10 modellers.

Our thanks to Squadron-Signal Publications for the review sample.



Pacific Glory

Pacific Glory - Airlines of the Greatest Ocean

by Freddy Bullock

Price: £16.95

Publisher: Airline Publishing Ltd,
101 Longden Road, Shrewsbury,
Shropshire, SY3 9EB

Tel: 01743 235651 Fax: 01743 232944

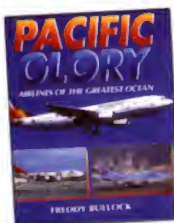
This title comes in an A4 format with 112 pages of colour and a laminated card cover.

Basically this title is a detailed photographic look at the various airlines operating over the Pacific. Each page contains one or two full colour photographs of one of the airline's aircraft.

These photographs are of the highest quality and fully illustrate the mass of colourful machines operating in this region. For the modeller the title offers a great deal of colour and marking information, as well as some idea of the wear and weathering evident on these jets.

This title is certainly one that can be recommended to all airliner modellers.

Our thanks to Airline Publishing for the review sample.



The Western Front

The Western Front from the Air

by Nicholas C. Watkins

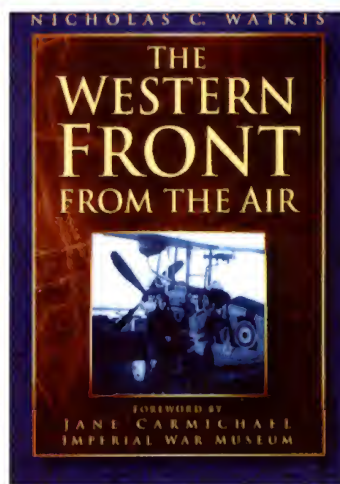
Price £20.00

Publisher: Sutton Publishing Ltd,
Phoenix Mill, Thrupp, Stroud,
Gloucestershire, GL5 2BU

Tel: 01453 731114 Fax: 01453 731117

This title is in an A4 format with 130 pages of contents and a hardback cover with a full colour dust jacket.

The title deals with the origins and development of aerial photography and the interpretation of such photographs during WWI.



The remainder of the text looks at the battles themselves with coverage of: Neuve Chapelle, Loos, The Somme (La Boisselle), Flanders-Courcellette, Vimy Ridge, Cambrai and Amiens. For the modeller the latter sections have little interest, other than from a technical viewpoint. The first section however includes a number of clear photographs showing camera installations and some of the aircraft types used during these early days.

The title is not really designed for the modeller, but the insight given into the use of such aerial photography during WWI is fascinating and one I am sure most people will enjoy reading.

Our thanks to Sutton Publishing for the review sample.

Airbus Wide-Bodies Jetliners

Airbus Wide-Bodies Jetliners

by Robbie Shaw

Price £12.99 (\$21.95)

Publisher: Osprey Publishing Limited
1st Floor, Elms Court, Chapel Way, Botley,
Oxford, OX2 9LP

Tel: 01865 727022 Fax: 01865 727017

Email: osprey@osprey-publishing.co.uk

This title comes in a 20cm x 27cm format with 128 pages of contents and a laminated card cover.

This title is a detailed photographic look at the Airbus A300, A310, A330 & A340 series. Each section takes a look at the use of each type and this is backed up with high quality colour photographs of a great number of the companies that operate the type. Although these photographs are not necessarily large, they are on the whole nice and clear.

Once again this title offers a mass of information for airline modellers and the title will, I am sure, be of great interest to them.

Our thanks to Osprey Publishing for the review sample.



Bookshelf Update

Aviation Shop

Apart from the Finnish A.F title reviewed elsewhere, this Finnish shop can supply a mass of titles and aviation related material. If you would like to know more, drop them a line at Aviation Shop, Kajamuksenkatu 12, FIN-00250 Helsinki, Finland.

(Tel: +358 (0)9 449 801, Fax: +358 (0)9 149 6163, Email: shop@aviation.fi) for more information and a catalogue.



TEE Publishing

Although designed specifically for railway enthusiasts, this publisher produces a yearly guide to museums and heritage sites. The subjects covered include vintage aircraft and the comprehensive list includes details of a great number of UK museums and collections along

with opening times, locations and (of course) the nearest railway station!

If you are looking to visit the UK this year, or if you are looking for new sites to visit during the summer, a copy of the 1999 guide at £3.50 will be of great assistance to you.

For more details contact
TE Publishing The Fosse, Fosse Way, Radford Semele,
Leamington Spa, Warwickshire, CV31 1XN
Tel: 01926 614101 Fax: 01926 614293
Email: 100544.1675@compuserve.com

FAMAS

The most recent issue of the Frog & Airfix Model Aircraft Society journal is now available. This issue includes a list of all the reissued kits from Airfix for 1999, a feature on making the first Airfix Gladiator, the Frog Me 410 and B-25 Mitchell and the usual members 'for sale' and 'wanted' classified section.

For more details on FAMAS contact:
Merv Hambling, 35 Rosebery Road, Suffield Park,
Cromer, Norfolk, NR27 0BX



Flugzeug-Katalog

This title, produced by GeraNova who are more famous for their extensive range of railway titles, is a new annual listing all current airliners. This title is an A4 format with 100 pages of full colour with a laminated card cover. Inside there is a twelve page history of civil aviation in Germany and this is followed by a look at all current airliner types. This list is alphabetically arranged and each entry is backed up with clear colour photographs and technical data.

Your only problem is that the text is German only, but the clear colour photographs will be of interest to all civil airline modellers.

For more information on this title contact:
GeraNova Verlag, D-80632 München, Germany.
Tel: (0 89) 13 06 88 0
Fax: (0 89) 13 06 99 30
Email: geranova@geranova.de



IBN

The latest title from Istituto Bibliografico Napoleone sas is on the Reggiane Re.2005 Sagittario. This 64 page A5 format title is in the same vein as the other titles we have reviewed from this publisher. The title will receive a full review next month, but for now all distributors etc can obtain copies from IBN at:

Istituto Bibliografico Napoleone, via Pavia 22, 00161 Roma, Italy.
Tel/Fax: 06/44 69 828 44 52 275

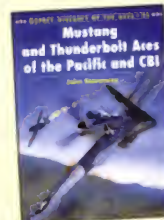


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